FOGHORN

THE MONTHLY CP/M PUBLICATION OF **FOG**

Vol. V No. 9 | Circulation 16,500 | June, 1986

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FOG has been formed as a users' group for all persons who use or are interested in portable computers. Membership is available to any interested party whether or not they currently own a computer. The ***FOGHORN*** is published monthly by **FOG** for its members and covers the CP/M operating system. A subscription providing bulk mail delivery to an address in the U.S. is included with membership in **FOG** for $25 per year. For an extra $19, you also can receive the ***FOGHORN***'s sister publication, ***FOGLIGHT***, which is devoted to 16-/32 bit systems. A $1 discount on both the first and second publications applies for payment made by cash, check or money order. See chart below for the additional postage required for other locations. Address all inquiries to **FOG**, P. O. Box 3474, Daly City, CA, 94015-0474. The voice phone is (415) 755-2000.

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FROM THE FOG

A New Beginning

by Ron Forsythe

This is the beginning of a new year for FOG. At the April 19 meeting, the Board of Trustees elected new corporate officers. These officers are:

Ron Forsythe ..... President, CEO, Chairman of the Board
Bob Kavinoky ..... Vice President
Alan Chattaway ..... Corporate Secretary
Roy Robinson ..... Financial Officer

We have some tough issues to deal with this year. At the Board meeting we received our 1985 financial report. The news was not good. FOG overspent its income by nearly $84,000 in 1985. Some of this is attributable to the move to our new office building, but much of it is from ongoing expenses.

FOG has sufficient reserves to deal with this deficit, however we MUST increase our membership immediately, or be faced with having to reduce services.

On this note, we have begun a membership drive. There is a prize of a modem and an Osborne 1, set up to operate as a remote bulletin board system (RBBS), for the Affiliated Member Organization (AMO) that signs up the most new FOG members between May 1 to October 31. I have sent a mailing to all FOG AMOs outlining the details of the campaign.

With your own RBBS, your group could make meeting announcements on-line and the exchange of information for the members of your group would be greatly enhanced.

One of the office staff tells me that if each local group would simply sign-up all of its members into FOG, we would significantly increase our membership. Come on folks, don't sit back on this one. Without local group support for this membership drive, FOG could be headed for a real crisis.

The general election brought to light many issues with which this Board will need to deal. I have established a **ByLaws and Policy Review Committee** to examine these issues and have appointed Jim Switz as committee chairman.

Many members have written to us with ideas on how to handle such things as conflicts of interest, open board meetings, and published minutes. I will also be asking officers of local AMOs to participate in this committee. The committee will then make recommendations to the board on how these issues could be addressed.

I expect direct board action of some items, with others being drafted as bylaw revisions and taken to the general membership for a vote. If you would like to give Jim your ideas, write to him care of the FOG Office or call his RBBS at (415) 692-1406.

I've spoken with a member who believes the Board should have dealt with the open meeting issue at its first meeting. I firmly believe that the board should open its meetings to the general membership. I also believe, however, that any action taken by this board must be done in a responsible manner.

The open meeting question will be top priority at our June meeting. In preparation for this meeting, we will be looking at ways to implement this change. The conference room at the FOG office, where we now hold our Board meetings, will not accommodate one more person. The mechanics will have to be worked out, but the Board will be opening its meetings to the membership.

I propose to write to the membership only when I have something meaningful to say. While it is not likely that you will be seeing this column every month, I will be writing it after each Board meeting.

Finally, I want to thank the membership for the interest shown in this past election. I believe we have a Board of Trustees with the dedication to learn from the past and look towards the future. FOG will accomplish some great things this year.

[Ron can be reached by writing to him C/O of the FOG office. He can also be reached by modem on FOG System #18 (707) 557-4403.]

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P. O. Box 3474
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United States of America

Membership number: _____

Name: _____

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FIRST OSBORNE GROUP
STATEMENT OF ASSETS & LIABILITIES
(Unaudidted)
December 31, 1985

ASSETS

CURRENT ASSETS		
Cash - Lloyds - Checking	($3,976)	
Lloyds - Savings	$576	
Lloyds - Payroll	$500	
Eureka - Savings	$75,000	
Guaranteed - Saving	$10,457	
Accounts Receivable	$7,395	
		$89,952
Inventory - Disks		$1,894
Inventory - Other		$1,592
Prepaid Expenses		$4,447
Organization Expense		$22
Deposit (Postage Meter)		$3,362
Deposits (Other)		$22
Prepaid Income Taxes		$4,800
		$106,091
PROPERTY & EQUIPMENT		
Trademark	$510	
Equipment	$76,742	
Leasehold Improvements	$9,982	
Less Accumulated Depreciation	($30,146)	
		$57,088
		$163,178

LIABILITIES

CURRENT LIABILITIES	
Accounts Payable	$1,271
Accrued Expenses	$45,716
Sales Tax Payable	$27
Payroll Taxes Payable	$6,600
Rebates to Affiliated Member Organizations	$9,810
	$63,424
UNEARNED INCOME	
Membership Dues	$83,246
Member at Large Dues	$14,418
Foreign Members - Postage	$9,852
Advertising Income	$3,450

CAPITAL		
Retained Earnings - Beginning of Year	$72,780	
Net Income Year Ending 12/31/85	($83,992)	
		($11,212)
		$163,178

FIRST OSBORNE GROUP
STATEMENT OF REVENUES & EXPENSES
(Unaudidted)
December 31, 1985

REVENUES:		
Membership fees	$224,339	83.05%
Members at Large	$43,702	16.18%
Sales less cost	$2,093	.77%
Total	$270,133	100.00%
EXPENSES:		
Salaries	$155,513	57.57%
Health Insurance	$2,684	.99%
Payroll Taxes	$15,193	5.62%
Workmens Comp. Insurance	$842	.31%
Rent	$29,099	10.77%
Advertising	$0	.00%
Utilities	$797	.29%
Telephone	$7,996	2.96%
Repairs	$1,147	.42%
Equipment Rental	$2,400	.89%
Equipment Lease	$4,778	1.77%
Postage	$6,892	2.55%
Supplies	$12,377	4.58%
Office	$8,952	3.31%
Publication of FOGHORN	$123,701	45.79%
Publication of FOGLIGHT	$5,128	1.90%
RBBS Expense	$28,205	10.44%
Insurance	$1,200	.44%
Taxes & Licenses	$10,254	3.80%
Professional Services	$4,605	1.70%
Interest	$247	.09%
Annual Meeting Expense	$13,120	4.86%
Convention Expenses	$383	.14%
Travel & Entertainment	$7,988	2.96%
Amortization	$170	.06%
Organizational Expenses	$22	.01%
Depreciation	$16,239	6.01%
Miscellaneous	$1,075	.40%
Total	$461,007	170.66%
OTHER INCOME:		
Advertising	$95,175	35.23%
Interest	$11,707	4.33%
Total	$106,882	39.57%
NET INCOME (LOSS)	($83,992)	(31.09%)

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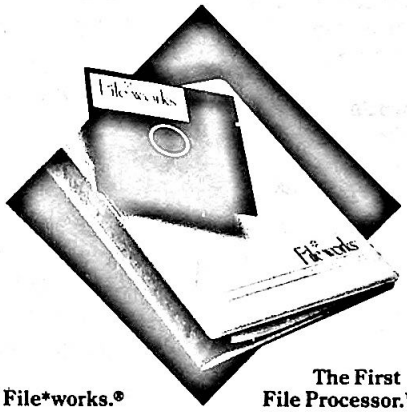

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COMPUTER MAKE/MODEL OPERATING SYSTEM DISK SIZE (5¼" OR 8")
RUSH FILE*WORKS @ $99.00:
CA RES. ADD 7% TAX:
TOTAL ENCLOSED:
VISA M/C CHECK BANK DRAFT
CARD NO. EXP. DATE

System Requirements—Operating System: CP/M® or CP/M-86® At least 2 disk drives. Your own editor program allows creation of custom file processing procedures. Available in 8" single density and popular 5" formats.

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Tongue In Cheek "Languages"

Some other languages we are sure you didn't know existed!

CFOA (by Harry M. Hawkins)

(Close Friend Of Ada.) Named for a close friend of Ada Lovelace, who was a close friend of Charles Babbage. Excellent language for organizing family tree data and social relationships. Commands such as TREE, SKELETON, CLOSET, RICH, UNCLE, AUNT, NOBODY, FAMOUS, and others are used to categorize people in a relational data base similar to popular software such as dBASE IV.

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LETTERS

On *FOGHORN* Indexing, Two Programs, and Some General Advice on Indexes

The Index to the Fourth Year of ***FOGHORN*** in the 11/85 issue was a noble effort but how about indexing on significant words? Easy Way to Print Dot Commands does not belong under "Easy"! Will this appear under "THIS"? I'll volunteer to index Vol. V if appointed by Gale.

Mail Regarding Lotus 123

The neat part about having material published in the ***FOGHORN*** is the mail one receives. Paul Lang of Burbank, CA, wrote in response to my *Setting Up a Comparison of SC and Lotus Values and Formulas* (12/85).

He suggests that after changing Lotus formulas into text to view or print them, that you retrieve numbers with **/W(orksheet) G(lobal) F(ormat) Fixed (or choose another format)** ↵. All numbers EXCEPT those set previously with Range commands will redisplay in the format you choose. Range set formats revert as set. I had asked if Lotus' window value/formula window comparison displays print with the print screen command. They do.

And Mail About WordStar

Sorab K. Ghandhi of Rensselaer Polytechnic supplied the 0-1 patch to make WordStar's **^Y** (delete line) into the safer control **^Y^Y**. He says "the patch . . . on the Osborne 1 *[WS 2.26]* is located at 052E. The old value 00 should be changed to 19." (Exec patch 9/85 ***FOGHORN***). *[The location for ver. 3.0 is 536; for ver. 3.3, it's 54E.]*

Happiness Is an Extra Disk Envelope

I think disk envelopes go to the graveyard occupied by ball point pens and safety pins. Even though you find them eventually, under the disk drive or marking a manual page, why not make extra? Pry one apart to make a pattern, use typing paper with fiber content (hold it up to the light to look at the watermark) and cut out a few. Glue the side flaps on the outside of the envelope. There, that's one frustration taken care of.

A dBASE III Problem

USE Datafile INDEX Indxfile, SET ALTERNATE TO Textfile, SET ALTERNATE ON, REPORT FORM Formname will not work if there is a MEMO field in the data base. The error message "too many files open" appears. It will work if:

1) you delete the memo field or;
2) you do not use the index file.

The importance of recording the output of REPORTs in a TXT file is the lessening of errors in writing tutorials for those

who will carry on what you design.

Lotus 123 vs. dBASE III

The Lotus Access System which translates dBASE files into 123 displays the message `not a dBASE II file` if you ask to bring in a dBASE III file. The book, ***Using dBASE III***, by Edward Jones (McGraw-Hill) gives the solution on p. 189-91.

In dBASE, type **USE Datafile, COPY TO Newfile.PRN SDF**. The PRN extension overcomes the default SDF extension. TYPE this PRN file to see that number columns are separated by a space or two. If not, correct in non-document mode of a word processor.

Go into a blank 123 spreadsheet. Put the cursor on A1. Type **/F(ile) I(mport) T(ext)** name of file. Everything, numbers included, comes in as text and all is contained in column A.

Now to bring in numbers. Put the cursor in a further-to-the-right column, row 1. Type **/F(ile) I(mport) N(umbers)** name of same file. The numbers that come in are values and each occupies its own cell. Test by asking to sum a column.

A CP/M and MS-DOS Publication Separation Problem

In this letter I wrote about the Osborne 1, two programs used in MS-DOS — but one earlier version is used in CP/M — and some general advice. I purposely lumped everything together because I would like my writing to appear in the good old original ***FOGHORN***!

Marianna van Erp
c/o Knight Korea
USAEDFE Box 161
APO SF 96301

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On Subscriptions and Supporting FOG's Publications

A recent memo to AMO officers referred to confusion over the handling by AMO's of subscriptions to the ***FOGLIGHT*** for 16-/32-bit machines. I have trouble understanding why, since I figured that the individual member (not the AMO) would make a decision whether to support either or both ***FOGHORN*** and ***FOGLIGHT***.

I would strongly resent any effort by my group to tell me what I could support. Responding to another point; as Treasurer of OPEK (Osborne Portable Enthusiasts of Kansas), I feel that FOG is giving us sufficient monetary support now, and that we should not expect additional money just because a member subscribes to both letters.

There was one shocker in this memo. Are there really members so FOGgy that they will pay $24 each for ***FOGLIGHT*** and ***FOGHORN*** subscriptions and get TWO membership numbers just to ensure complete separation of the two subscriptions? If any such members are in OPEK, I would be a very FOGgy treasurer not to accept twice the normal support from FOG for these members.

This memo also referred to Special Interest Groups (SIGs) and the cross-pollination of information. Out here in the wheat fields, Wichita's major computer groups — Osborne, Kaypro, Sanyo, Epson, even the blue terror — have joined together in a newsletter.

It appears to be very successful after several months operation. Several groups have refused to participate, including the fruity one. Possibly they don't want to be reminded how isolated they are. At any rate some of OPEK's members are now hoping to form an umbrella group with other user groups that would be more than just a common news; the idea would be better exchange of information.

I guess this memo surprised me with the apparent lack of common sense one can find among computer enthusiasts. I never have figured why we are always reading "Apple is a trademark of . . ." etc., ad infinitum. Did Steven Jobs possibly know a first year law student (called "sea lawyers" in the Navy) who gave dumb advice?

When Coke and Pepsi, Anacin and Bufferin, General Motors and the other car makers — when they start putting such foolishness in their ads; THEN I will know the ambulance-chasers have really gotten control. I'll probably even start assuming the rest of you peasants don't know if you should or should not dial "1" before you make a toll call. Oh yeah, an "800" number is toll-free.

Jim Simpkins
OPEK Treasurer

[We never dial "1" in my neighborhood! David]

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"Help Yourself" Is Right On! But There Is More to This

The headline of Bob Thomson's February ***FOGHORN*** piece on beginners is right on: HELP YOURSELF! Without advocates like Bob to break ground in the microcomputer world, many useful programs in the FOG library would never have surfaced. To paraphrase Bob, anyone who wants to learn the rules of the game had better study and practice.

But hold it. Probably the great majority of computer buyers use their device for one principal purpose. It may be to write deathless prose (what techies call word process) or to bookkeep a small business (use spreadsheets, data bases, etc.), or simply to idle away time playing games. For them the ***FOGHORN*** is more an interesting magazine than Holy Writ.

Like many automobile drivers, they expect to bring real problems to a mechanic. They just want to drive.

Granted it's a waste of the computer's potential to restrict it's use to a tiny percentage of its strength. But this is a free country too. If that's all the user wants or needs, let's respect a choice to forego learning all about Assembly language, CP/M, PIP, STAT, etc.

The user after all knows best how much of his or her lifetime to allot to tinkering. Most of us don't need to know whether the earth is round or flat, so long as the airlines get us where we want to go.

Beginners may realize something elitists may have forgotten. If life is learning to smell flowers, then computers are just one variety of flower, and not the only bloom in the bunch.

Al Ujcic
San Francisco, CA

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FOG Is My Help

In the February 1986 ***FOGHORN***, Bob Thomson (*Help Yourself!*) advises that beginners should not depend on FOG for information, but should rather look to other resources, including their local users' groups.

What he does not realize is that many of us joined and are members of FOG precisely because there is neither a local users' group available to us nor is there the possibility of forming one.

I am a founding member of the North Alabama Osborne Users' Group (NAOUG, Huntsville, AL). I drove 120 miles to get to the meetings each month and was disappointed that I could not serve on the executive committee in those early days because of the distance involved. I was gratified to hear, the last time I was in Huntsville, that the group is going well.

Now I live even further away, and there is no possibility of attending a meeting. There is only one other group in Alabama and it is also inaccessible.

FOG is my support group and my users' group. That is why I joined. That is what I look for. If FOG can't fulfill that function, what with leadership problems and catering to those who know the difference between BDOS and BIOS (and care!), then perhaps I should follow the advice implied in his article, buy up the early issues of the ***FOGHORN***, and drop my membership — because there is nothing here for me.

Ted Petersen
Berry, AL

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About Public Domain Software

I like your publication; I learn a lot from the **LETTERS** section, from the tips by your experts at FOG and other members.

One of my main reasons for joining FOG was to make use of public domain software. Since I am not in an AMO and none are anywhere near, I am stuck with fending for myself.

I would like to pay someone in FOG to select "good" useful utilities and other software and put it on disks for my Osborne Executive. Can such a thing be done?

Most of the help I can get here on the island is IBM-oriented. Talk CP/M and they fade away.

Appreciate any help you can give me.

Robert Hammond
Hilton Head Island, SC

[We can't do that here in the office — just not enough hours in a day! But get the starter disk first, and a library directory. FOG/EXE.016 is also a good disk to get for the Executive. You should keep an eye on the reviews and articles in the ***FOGHORN*** *for useful programs. Jack]*

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Want Back Issues?

Please refer to **FOG MEMBER MERCHANDISE** in this issue for information on obtaining back issue copies of ***FOGHORN***. We maintain an inventory of back issues because the information contained in them can save you hours of aggravation!

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NOVICE NOTES

The first steps for those starting out.

Hints on NSWEEP from the Horse's Mouth

by Doug Sears

I came across some notes from a Micro Cornucopia meeting; some of which covered Dave Rand talking about his program NSWEEP. Dave is working on the Definicon 32-bit board for a living but continues to improve NSWEEP in his spare time.

You should all have ver. 2.07 — there is a ver. 2.08 out, which is an unauthorized update by an unknown person. Avoid it, (it also sometimes destroys files).

Dave is working on ver. 2.09, using a smaller, faster SQueeze algorithm, and since that will save about 4K of space, he may add some features, possibly a bidirectional View or a left margin for the Print file command.

Dave had some useful comments on how to use NSWEEP. I won't say anything about whether features are "undocumented" or not, because people (me included, of course) sometimes miss perfectly well documented things.

1. To move a file to a different user number, just rename it, and include the user number in the file spec., e.g.:

B0:NSWEEP.COM R B14:NSWEEP.COM

You can also do this with the wild card rename. I guess you can throw MOVE.COM away now (I dumped SQ and USQ long ago, and use NSWEEP instead).

2. The little-known **Y** command.

To understand this command, you need first to know about the mysterious "eighth bit," also known as "bit 7" (counting from 0 to 7), the "high bit," or the "parity bit". Up to now, standard ASCII has been a seven-bit code, leaving the eighth bit of a byte free for other uses (there is a new eight-bit ASCII, but that's irrelevant here). In particular, the inner workings of CP/M ignore the eighth bit of each letter you give it in a file name, and then proceed to use some of those eighth bits for marking special files.

You will usually not see these high bits, even, e.g., on 1984 model Kaypros, which show letters with the high bit set as graphics characters, because directory listing programs also ignore the high bit. If you do **STAT *.*** you'll be shown if there are any Read-Only (R/O) or System (SYS) files. A file which has the eighth bit set on the first letter of its extension is a R/O file. The second letter marks a SYS file, and the third letter marks a file for programs that make backup copies of all files that have been changed (this is the Archive bit).

So there you have the **RSA** you see when you try to use NSWEEP's **Y** command: **R** for Read-only, **S** for System, **A** for Archive.

Y also lets you change the high bit of the first four characters of the file name, called 1, 2, 3, and 4 in NSWEEP's terminology. High bits in characters 5, 6, 7, and 8 have very special meanings in TURBO-DOS so they aren't used, in the name of compatibility. Here's a summary for that famous hypothetical file FILENAME.EXT.

FILENAME.EXT
1234____.RSA

NSWEEP can display the marked characters in inverse video, underlined, or whatever your screen can display. (Unfortunately, 1983 model Kaypros won't support highlighting. To simulate highlighting on 1983 model Kaypros, you can make the lead-in and lead-out strings be appropriate printable characters, such as "<" and ">". This disturbs the alignment of columns, but it's better than nothing. The lead-in string is at location 104H [length of 0 to 6 at 104H, string starts at 104H]. The lead-out string is at 10BH [same format: length plus up to six characters]. I recommend SUPERZAP as the easiest program to use for making simple patches like that.)

Now that you know something about high bits, we can finally get to NSWEEP's **Y** command. The only trick you need to know is that it only works on tagged files (just like the **Q** command).

So all you do is tag the appropriate file, type **Y**, and specify which positions you want to change (any or all of 1, 2, 3, 4, R, S, or A, separated by commas or not).

Any bits not specified will be reset back to zero, so if you specify something other than 1-4 or RSA, say some random letter like **k**, then all bits will be reset.

Some obvious applications come to mind. Sometimes I get Read-Only files from other people, and this saves me from having to hunt up a disk with STAT on it.

Conversely, you can set your precious files to R/O to keep yourself from accidentally erasing them. People with hard disks especially might want to look into the programs that use the Archive bit for selective backups. You could use one of the other bits just to mark a group of files.

[Reproduced from the Eugene KUG Newsletter.]

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The Backup

by Henry G. Belot

To be honest, I ignore all kinds of advice about using my computer. It sits tight under a shelf without the benefit of a fan and is going for long hours nearly everyday. I don't disconnect peripherals when setting my JG Communications clock. I never back up WordStar files in the middle of an editing session and consistently erase the backup files at the end of the session.

But there is one thing I always do: I back up every disk I use. I have at least two copies of every program disk and I copy each data disk at the end of each session.

I learned this critical discipline several years ago. I used to use a dedicated word processor that didn't back up anything. The only "backup" was a notice that appeared on the screen at the end of each session warning you to make a backup copy of your document disks.

At first I ignored the notice. Then the word processor crashed and I lost the document I had been working on. That taught me the lesson.

Those backup files that programs like WordStar clutter your disks with have their uses, but they don't provide real protection against fatal errors like damaged disks or power failures. So learn to take a few minutes to back up each data disk at the end of each session.

On my Osborne 1, I keep the copy program on every disk I can fit it on, and I've used the SETUP program to program the 9 key on every program disk to **COPY**↵. At the end of each session, **^9** starts the program. Then I pull the program disk out of Drive A, put in the appropriate backup disk, key a **C** for Copy and a **B** to copy from the Drive B and a minute or two later all my work is safely preserved. (With the Nuevo Extended Storage Upgrades, you also have to specify the destination drive, A or C.)

I keep backup copies for everything except very old data disks that are no longer in active use. In the rare cases when I return to such a disk, I begin the session by making a backup.

Incidentally, about that word processor: I miss it. The lack of individual document backups was no big deal since an "Undo" command took care of 85 percent of the applications for a document backup file and a built-in package of menu-driven disk maintenance utilities allowed you to recover from many serious disk errors. It was versatile, a breeze to use, and it taught me to keep backups of all my work. Heed its advice.

[You can also make backup disks with the public domain program NSWEEP (a "must have" program which is on the FOG CP/M Starter disk). This is also a very useful and easy to use program for making backup copies of disks. It also does some useful housekeeping on the placement of the files on your disk. To explain: when you begin files on a disk, they are randomly placed on the disk tracks making "more work" for your system to find files when they are called up. If you use NSWEEP to make the backup copy of your disk, it will make the files contiguous on the disk. This means you won't have files scattered all over the tracks and it is "less work" for your system. Joanne]

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Delivery Problems?

Please refer to page 2 for the additional postage charges for First Class and non-U.S. delivery of ***FOGHORN***. **FOG** cannot be responsible for non delivery of copies sent bulk mail.

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Two Uses for PIP

from K>BYTE

(Kaypro Users' Group Newsletter)

A new member had a Perfect Writer file that was too large to fit into her computer's memory, and would not come up when summoned. The problem was solved using a PIP trick that breaks the file into smaller segments that can be edited and then chained for printing.

Using the letter **Q** will tell PIP to quit copying, and the letter **s** will tell it to start. Here's how to do it:

* View the file that's too big with the CP/M resident command **TYPE <FILENAME.EXT>**, or the **V** option in NSWP207. Find a string of words near the middle that is unique. Let's assume that your large file is named BIGFILE.MSS, and when you view the file you find the following unique string of words in the middle of the file: "Joe is a klutz".

* Put a disk with PIP and your file named BIGFILE.MSS in your Drive A.

* Type **PIP Little.mss=BIGFILE.MSS[Q Joe is a klutz:^Z]**↵. (The only spaces should be after PIP and in the unique string.) Note that this can be all on the same line as the "PIP". If your unique string of words is long, type a ↵ AFTER the PIP. You will get: * — now type the part **Little.mss . . .** When the machine stops wheezing and cranking, you will have a new file Little.Mss that consists of everything from the beginning of the file to "Joe is a klutz". Your original file is intact, and you've extracted the first half of the file for future work. Now you need to get the second half.

* Type **PIP Little2.mss=BIGFILE.MSS[sklutz:^Z]**↵. You will now have a file — "Little2.mss" which has the second half of your too big file. You can now work on the two files as your wish. Both files will have the word "KLUTZ" in them.

This routine will work on regular ASCII files (text), but probably not on other kinds. The routine is a bit finicky and may have to be repeated.

Going the Other Way

Speaking of PIP, here is how you can merge two or more files (ASCII). Let's say you have three small files SML1.TXT, SML2.TXT and SML3.TXT and you want to smush them into one file called BIG.TXT. With a disk with PIP on it in Drive A and your disk with the three small files on them in Drive B you should type:

PIP↵
***A:BIG.TXT=B:SML1.TXT,B:SML2.TXT,B:SML3.TXT[OV]**↵

You now have a file on the Drive A consisting of the three smaller ones.

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ARTICLES

What Went Wrong?

by Alan Chattaway

Last night around 10pm I had a telephone call from a teacher I know. She just started learning WordStar, and was writing her first file on her first disk. She had typed **^KD** to save the file — and lost everything!

As I looked deeper into the problem, the details were so unusual that I had never seen anything like it before. I thought I'd share it with the readers of ***FOGHORN*** to see if anyone can shed some light on it.

Hardware: Multitech Apple IIe clone (Taiwan product)
Has Z80 on motherboard, runs Apple II CP/M.

Software: WordStar version 3.0 or 3.3 (not sure which)
Apple II CP/M 2.2

The Problem

A newly formatted disk was inserted and a new file called NEEDLIST was opened. When NEEDLIST was close to 7K in size it was saved (apparently successfully) with either **^KS** or **^KD**.

More was then added to the file, and when it reached almost 17K it was saved with **^KD**. When printed, the file turned out to be damaged. After the first few pages (the part saved at the FIRST save), the subsequent text was missing and the early pages were repeated, more than once, up to the end of the file.

A check with the utility CAT.COM (which seems to be similar to XDIR.COM) gave the following list of files:

```
/S          .$$$    OK
IT          .       1K
NEEDL       .       OK
NEEDLIST.           17K
NEEDLIST.BAK        7K
```

Note that /S, IT and NEEDL contain all the letters of the filename NEEDLIST. The file IT contained garbage — seemingly binary data.

The next day, the teacher advised me that another teacher had formatted the disk for her and had now suggested that the "wrong format" had been used. Would a disk originally formatted for Apple DOS work partially at first under Apple II CP/M and then "die" as this one did?

I'm curious to know what really went wrong, and am especially interested in preventing it from happening again! Hackers with an explanation can contact me at:

6666 Arlington Street
Vancouver, BC
Canada V5S 3N9

I would appreciate any replies. I will pass on the advice received to my teacher friend, and perhaps edit it into a letter for the ***FOGHORN***.

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Thanks Telion Software

by Dorothy M. Russell

*I believe it is important to praise good service when it is found, especially when it is found in a software company. My experiences with software companies have been pretty negative. (They mostly don't know your name if you have problems with something they have sold you.) So I would like to pass along a terrific experience to the readers of the **FOGHORN**, the best computer magazine in possibly the entire universe. I also sent a copy of this letter to the company in question.*

We recently heard about a program called FREEFILER ($49.95) manufactured by Telion Software (P.O. Box 1464, La Mirada, CA 90637, (213) 946-1015). Basically FREEFILER finds key words and phrases and writes them to disk. Formatting the material then can be done with WordStar and printed out. Because we needed to use it for a slightly different application than it was designed for, I wrote poor Mr. Gomes (from the company) a three-page letter trying to explain what we needed the program to do because the advertising and reviews were understandably lacking in detail.

Briefly, my husband is a chemistry professor and we needed a program that could handle a 300 question bank data base in text form. We use a Kaypro 2, an Osborne 1 and a Televideo, and we needed a program that would work on all three. We work together on computer projects. I type them, he uses them.

In less than a week I received a package containing the manual and a note asking me to call if I had any questions as Mr. Gomes had limited time for letter writing.

Needless to say, I was flabbergasted to receive a manual without so much as paying a dime for it. After reading it, it seemed that it would suit our purposes so I wrote a shorter note, this time ordering the program but reemphasizing the need for it to work on all three of our machines. I also told Mr. Gomes to tear up the check if he didn't think it would work and to let me know so I could return the manual.

Again, almost before I sent the check off, we received a phone call from Mr. Gomes inquiring about the use of the three machines (you know how software people are about that). He seemed satisfied that we were genuine and in less than another week, we had our program and started work on our project.

After using the program for a couple of months, I discovered what appeared to be a bug in the output file so I wrote a short note explaining the problem and in four days I received in the mail a new disk (that now works flawlessly) and a note explaining that apparently a handful of bugged disks were sold about the time we purchased ours and this new disk would solve the problem. It did. Telion didn't even ask for the

first disk back, but, of course I am going to return it anyway.

I think this kind of service is rare and wonderful and want Telion to know that it is appreciated.

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Nicked It and Flipped It

by Ron Kenner

Jim Holmes (OKOK) picked this story up from Mike Faith, President of TUGNET, proving once more that there are two sides to every flippy, and that a nick in time, well . . .

No doubt people go to great lengths to save disk space. As Jim observed: "I've heard of people transferring files from Osborne to Kaypro format in order to pick up 10K, and lots of people use "flippies" — notching single sided disks and formatting the "backs" for use as well".

Flippies often work well, but not always. The following lesson in inefficiency expertise clearly suggests first place for crash of the month.

As Mike related it, one well-intentioned guy proceeded to convert all his data disks to flippies. "What he couldn't understand," Jim says, shaking his head, torn between laughing and commiseration, "is why, having made the transfer, he'd lost so many files."

Of course, Jim went on, and as Mike explained, since the poor guy had double sided drives in his machine he was already using both sides.

So you think you've got crash of the month sewed up, but of course, there's always the threat of one better. Here's one, reeking in pathos but yet more easily correctable. And thus a partial set of warped disks here to an old friend, Jerry Bixby.

Bixby, a beginning computerite (to give you an idea how beginning, he was using the carriage return for every line and moving his cursor with the space bar) has been a science fiction writer for years, but still fears computers. How smart can you get?

And Bixby is co-author of numerous science fiction works in print, television and film, including original story and collaboration on the screenplay for ***Fantastic Voyage***, and the short story ***It's a Good Life***, which the late ***Los Angeles Times*** critic Robert Kirsch once called the "singularly most horrifying short story" in the English language. (It later was filmed by Steven Spielberg.)

Anyway, Bixby took a new trip into the computer world, far from the good life, it seemed to him, as he looked wistfully at his Dark Ages typewriter.

What he did this time was overload his double density floppy with 40 some script pages in a single file, and with no backup. Undoubtedly it was his most brilliant work to date, ha ha.

And Jim Holmes who had just walked in after the phone rang, was brought in as the emergency voice controller. There were tense moments. listening to Jim talk Bixby into a safe landing on what was like something out of ***Airplane Four***. The only thing left out — Jerry didn't have a computerized rubber auto pilot to inflate.

So it was a tough choice this month. Bixby's "terror flight" lasted about 40 minutes. But since he did manage to land safely, and without loss of copy, the trophy for crash of the month and a compensatory box of warped disks to the guy who flipped.

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Tongue in Cheek "Languages"

Some other languages we are sure you didn't know existed!

RASCAL (Contributed by William Hanks)

RASCAL is a language fought with imps that must be disciplined before proceeding to more cultured levels. The commands include: BAD, ILL, EVIL, HARM, VICE, YEGG, MOLL, HURT, and MUG, which are interspersed with %*!@#&%$* keys in making needed expressions and arguments. The completed program often resembles an outline of a technical paper.

Commands in the LITTLE RASCAL (preschool) version feature mnemonic names reflecting the behavior of children under five so disgusting that they cannot be published here.

It is suggested the newcomer to RASCAL go to the public library and search for a reputable book on the history of Sicily since most versions of the language are but subsets of MAFIA.

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BOOK REVIEWS

CP/M Assembly Language Programming

from K>BYTE

(Kaypro User's Group Newsletter)

CP/M Assembly Language Programming, by Ken Barbier, Prentice-Hall, Inc. 226 pages.

For the computer user who really wants to get to know his/her machine, learning assembly language programming is a must. But where is the novice to micro assemblers to begin?

Already equipped with some of the appropriate software (i.e. ASM.COM, LOAD.COM and DDT.COM), it would appear to be simply a matter of finding the right book or manual on the subject. However, as most computer users know, this is easier said than done.

Enter Ken's book. After a few false starts with various other books on Z80 and 8080 programming, I found Barbier's effort to be just what was needed; a straightforward, highly understandable introduction to assembly programming. There are a number of reasons that make this book the best I've seen on the subject.

First, Barbier places 8080 assembly language programming in its proper context; namely the CP/M operating system. This is a definite improvement over other books where either the authors concentrate solely upon the assembly language itself or CP/M is the subject under discussion, with only minor and/or incomplete references to 8080/Z80 programming.

Second, as a result of his approach, programming examples are given that seem a little more practical than the standard beginner's fare of adding two numbers together, switching the contents of two registers, etc. Certainly Barbier does start with a seemingly trivial program, however he builds upon it as he takes the reader forward into more advanced concepts.

Third, Barbier's philosophy can be described as "learn by doing, learn when needed". The programs given are meant to be run on almost any standard CP/M system. As such, the second half of the books develops into a good hands-on tutorial. You apply immediately to the programs, what was taught, not having spent your time learning a bunch of assembly language instructions that you don't use.

Fourth, and also of some importance, is the author's sense of humor. Reading a work on assemblers in which the author is totally serious, can obviously make for some pretty dry reading. Thankfully, Barbier not only chooses to inform, but also to entertain a bit.

Perhaps the biggest problem with the book, is finding a copy of it. I found it in the Edmonton Public Library, but have never noticed it in any bookstore. If you are seriously interested in it, perhaps your best bet would be to order it at one of the better bookstores in the city.

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Tongue in Cheek "Languages"

Some other languages we are sure you didn't know existed!

PL/2 (by Harry M. Hawkins)

(IBM's sequel to PL/1 — the ultimate language.) An extremely difficult language to use since all variables and commands change on a random basis. Programs that are written with this language can be run correctly only once since all subsequent runs generate syntax errors.

Used by highly secret CIA agents and IRS operatives to prevent the compromise of sensitive national security data and to confuse citizens considering legal action against the IRS via the freedom of information act.

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HARDWARE REVIEWS

The DEC Rainbow B

by Alan Chattaway

This review is a response to Amer W. Nelson's article in the March 1986 ***FOGHORN*** on the DEC Rainbow (page 72). I've used DEC Rainbows now for more than three years, and while I like the Rainbow in many ways and agree with you that there is no such thing as a bad CP/M computer, there are other facts about the Rainbow that ***FOGHORN*** readers should be aware of before they rush out to buy one!

(a) The Rainbow keyboard has plenty of special function keys — but NONE are user programmable like those on the Osborne. They have to be programmed into the software — and a lot of the software ignores them. Also, the DEL key is where the BS should be, the BS and ESC are hidden among the function keys, and the tilde is where ESC should be. Other than that, it's one of the best keyboards on ANY microcomputer; and it's attached to the monitor by a standard telephone handset cable, so you can get a long extension (useful in a group or classroom situation) cheaply at Radio Shack.

(b) The Rainbow monitor is non-standard (you cannot use any other brand) but just about the sharpest and clearest on the market. The character set is attractive and well formed (it makes IBM look awful) and you can set it for black characters on a bright amber background, which is much easier on the eye. The adjustments which are stored in the CP/M boot tracks through SETUP.COM on the Osborne (baud rate, screen size, etc.), are stored in non-volatile memory on the Rainbow, so all your system disks have identical copies of CP/M.

BUT, they made the mistake of designing the Rainbow like a minicomputer, so the screen is not memory-mapped, instead it functions like a remote terminal linked to the main system unit by a serial line! This makes it the slowest at rewriting the screen of any micro I've used. The effect is tolerable in WordStar (though moving the cursor always results in overshoot, and scrolling the screen with the arrow keys always overflows WordStar's keyboard buffer), but is frustrating in SuperCalc and downright annoying in the BROWSE mode of dBASE II. If your task involves extensive use of full-screen editing, the Osborne wins hands down!

(c) The Rainbow disk drive is an oddity. It's generally well made, but strangely designed. It occupies the space of one full-height drive, but accepts two disks. The design is symmetrical, with the motor in the middle and the two disk slots near the top and bottom edges. Because of the symmetrical design, the lower disk must go in UPSIDE-DOWN (you get used to it!). Because so many users insert their disks the wrong way up, there is a special feeler that checks for the presence of a write protect notch on the "wrong" edge. If it finds it, you get a message `drive not ready`, and nothing else works until you correct the disk placement.

Worse, both floppies share a common motor and head positioner. Both disks turn whenever one has to turn, and both heads move whenever one must seek a new track. If you are copying a file from A to B, there is lots of clicking and buzzing as the heads seek the right track first on A, then on B, then back to A and so on. On an Osborne (or any normal computer), each drive would find the right track on its disk and stay there throughout the copying process.

The drive doors hinge on two steel pins that are push-fitted into holes in plastic. These fall out fairly often — especially if the system unit is mounted vertically, and that's almost a necessity, since the Rainbow system unit is even larger than an IBM-PC, and takes up most of your desk unless you buy the optional (and expensive!) vertical floor stand.

The Rainbow drive is quad density (i.e., 80 tracks instead of 40) but only single sided, so it holds only 400K — no more than a standard double sided 40 track drive. You can't flip disks either, because of the feeler that detects a write protect notch on the wrong edge! Being single sided and non standard, it cannot read double sided IBM disks, even under Media Master (and the Rainbow version of Media Master costs double all the other versions!).

Also, being 80-track, the Rainbow has narrower heads than a 40-track drive. If it writes (even with Media Master) to a disk that was formatted in the Osborne, its narrower head doesn't completely overwrite the original data and there's a good chance that the Osborne won't be able to read it! The only way to be sure is to first bulk erase the disk, then format it ON THE RAINBOW as an Osborne format, using Media Master.

Lastly, this drive can be rough on disks. Since the disk slots are nearly at the edges of the drive, there was very little room for the cone that grasps the disk's center hole. DEC's engineers solved this by using a shallow cone which does not retract very far out of the disk when the door is open. If the disk is not pushed in ALL THE WAY, when you shut the door, the center cone crunches the edges of the hole. DEC states that disks with reinforced center holes must not be used due to possible drive damage. I guess they mean that if the disk was stronger, it might be the cone that gets crunched!

Since the cone doesn't retract very far, the back side of the disk can get scratched if the disk should flex while being removed. Does that happen often? Yes — because there is a sharp edge in the disk slot that often catches on the write protect notch when withdrawing a disk! (Another reason to avoid flipping your disks in the Rainbow.) Since this drive has non-standard mounting and plug arrangements, you cannot replace it with standard drives. And DEC replacement drives cost much more than ordinary

⇨

drives.

I don't want to overemphasize the impact of all these drive design deficiencies; a single user can live with this drive happily and never experience ANY problems. It becomes a problem only where there are multiple users — some of them novices, some used to cruder and more rugged drives, such as the Apple — all sharing one Rainbow; or where Rainbows must coexist with IBM-PC's, and disks need to be exchanged.

(d) Software: except for completely generic CP/M utilities, there is very little software available for the Rainbow, except through DEC. The Rainbow uses ANSI Standard escape sequences to control the terminal and keyboard. A lot of good CP/M software cannot be installed for ANSI Standard terminals. For example, many programs allow only a single byte to move the cursor by one character in any direction; e.g., **^H** to move left. In the ANSI Standard you must send three bytes: **ESC [A** in this case.

Amer points out that the Talisman terminal conversion program gets around this. However that works only for 8-bit CP/M software. Buying 16-bit CP/M-86 or MS-DOS software through DEC is an interesting experience; things are announced many months before they are available, and cost up to 50 percent more than street prices. One college where I taught ordered SuperCalc2/86 in June, for a computing course starting in September. It arrived during the last week of the course, in March the following year. The cost was $329 (Canadian) while SuperCalc3 was selling for $250 locally.

The availability of MS-DOS software is much worse. A lot of off-the-shelf MS-DOS software actually bypasses MS-DOS after it's loaded, and deals directly with the hardware (poor programming practice, but that's life!). The hardware therefore has to emulate IBM's; the Rainbow does not. Therefore, most "off-the-shelf" MS-DOS software just hangs up. Virtually no MS-DOS software manufacturer supports the Rainbow; instead, DEC has agreements for some of the big-name packages (Lotus 1-2-3, WordStar, dBASE III, Word Perfect) whereby DEC gets source code, adapts it to the Rainbow, and retails it at high DEC prices. Not even Ashton-Tate, for example, can supply dBASE III for the Rainbow; they have to buy it from DEC!

This becomes a problem only when you want to upgrade, and DEC hasn't yet persuaded the owner of the software to let DEC have the upgrade. Currently DEC's Lotus, dBASE III and Word Perfect are all one release behind the IBM-PC versions, and we may never see WordStar 2000. I found unfixed bugs in the Rainbow versions of WordStar and dBASE III; WordStar (the CP/M-86 version) often loses count of the line length if you use **^PO** or **^PF** in the line, so it doesn't justify correctly. dBASE III often hangs up if you interrupt a LIST TO PRINT command, and this requires you to restart the computer.

(e) Printers: Amer says he hasn't yet succeeded in hooking up his serial printer. I don't want to sound discouraging, but apart from DEC's own rather nice but overpriced line of printers, we had trouble interfacing anything else. I'm no expert, but by hooking up some test equipment we seem to have determined that DEC has a private interpretation of what's meant by XON-XOFF (the only protocol they support). It appeared to us that DEC sends text to the printer in little blocks of 64 bytes or so. Instead of XOFF from the printer making the Rainbow stop sending characters right away, it keeps sending until the current block is finished. Unfortunately, many printers don't have that much room left in their buffers when they send the XOFF back to the computer, so some characters get lost. Our printer was designed to flush its entire buffer on overflow, so we lost whole paragraphs!

I understand Epson printers work; but this raises another problem. Graphics software that runs on the Rainbow's ANSI Standard terminal often expects DEC's printer graphics to be present as well, so it won't print on the Epson. On the other hand, software set up to print graphics on an Epson may not be available for an ANSI terminal!

So, would I buy a Rainbow? It depends what price you place on elegance and pleasure of use, as opposed to versatility. The excellent keyboard and superb monitor make it comfortable to spend all day at the Rainbow — I could not say that of the IBM-PC. It's also the best smart terminal for the VAX. By using DEC's old VT-180 disk format, which is recognized by both the Rainbow and the double density Osborne 1, files are easily transferred in either direction.

Yes, overall the Rainbow is a good computer.

But a PC clone with a V-20 processor and a 5151 keyboard would perform adequately on most of these points, and would run a LOT more software.

Therefore, I could not justify paying more for the Rainbow than for such a PC clone system; and even then I'd think twice. I already have two Osborne 1's, and DEC has stopped making the Rainbow.

Do I really need another orphan?

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FingerPrint Makes an Epson Look Like a Daisy Wheel

by Jim Holmes

For some time now I've been trying to justify buying a daisy wheel printer. My Epson FX-80 is fast, very reliable and produces clean, readable text. Most of my correspondence can be handled with the Epson, but occasional letters demand more than "correspondence" quality. The problem is, they're really infrequent, and I just haven't wanted to spend the amount any of the printers I would trust will cost. An ultimate solution may still be a daisy wheel, but that day has been postponed a good bit. A $60 upgrade for my Epson is responsible.

The product I refer to is called FingerPrint. Their new LetterWriter version's output is advertised as near letter quality. I'd bet most users will find it FULLY acceptable. When a letter printed with the (upgraded) Epson was xeroxed, then compared with one made from a daisy wheel original, I couldn't find a difference. It's hard to tell on the originals.

The upgrade is easy to install and I'm no hardware person. It took about 10 minutes to open the case, change three chips, and clip a resistor lead, as described (and pictured) in the excellent instructions provided with the upgrade. Once installed, you have the option of emulating either an IBM Graphics or an Apple printer (for Macintosh users).

Beyond the near letter-quality type, FingerPrint's range of Epson features is very nice. Their menu offers 16 features, as follows:

1. LetterWriter mode (32 cps).
2. Proportional mode.
3. Condensed mode. (17 cpi).
4. Elite mode (12 cpi).
5. Double-Wide mode; stays on at end of line.
6. Emphasized mode; creates BOLD print.
7. Double-Strike mode.
8. Perf-Skip Toggle; for printing unformatted files or text.
9. Left Margin Toggle; indents 1/2 inch, for punching/ binding printouts without obscuring copy.
10. Italics mode.
11. Underline mode.
12. Fine print mode; sets half-height letters, half spacing and condensed print (great for footnotes!).
13. Eight lines Per Inch Toggle (default = 6).
14. Quiet Mode (half speed).
15. Slash Zero Toggle.
16. 8-1/2" Wide Paper Toggle (FX-100 only).

Many of these features can be paired, if desired.

The upgrade should be available through most Epson dealers, or you may write directly to:

Dresselhaus Computer Products
837 East Alosta Avenue
Glendora, CA 91740

Be sure to specify your Epson's model number!

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SOFTWARE REVIEWS

SBASIC

by Paul O'Nolan

BASIC, an acronym for "Beginners All Purpose Symbolic Instruction Code" is the name of a computer language originally developed at Dartmouth College for instructional purposes; instruction of people that is, although the "Instruction" in the name refers to computers.

Since then there have been at least 101 BASIC's — a babble of tongues rather than a language. Now there is SBASIC or Structured BASIC from Topaz Programming Inc., ready to challenge the established giants: Microsoft's MBASIC and Digital Research's CBASIC.

SBASIC's main impetus for market penetration comes from the Kaypro computer with which it is sold. If you buy a Kaypro, you get SBASIC (I won't say "free" because we know better than that) along with several other programs for word processing, spreadsheet analysis etc. Structured BASIC is also available separately, from many other sources. One way or another it is likely to be the first exposure to a programming language for many new computer owners and first time programmers.

The main feature of Structured BASIC is, as its name suggests, that it is a structured language. It has a variety of control structures in addition to the usual FOR NEXT's, GOTO's, computed GOTO's and GOSUB's found in most implementations of BASIC. Indeed with its complement of REPEAT UNTIL's, WHILE DO's, PROCEDURE's and even a CASE statement, it bears a strong resemblance to Pascal.

The similarity extends even to explicitly declaring variables and their types using a VAR statement. Variables, which may be of six types from double precision real to byte, may be declared as global, or local to a particular procedure or subprocedure.

Other features include the ability to base variables at an absolute address (with overlaying possible). IF statements may be nested, unlike most kinds of BASIC. Chaining is possible — you can execute any COM file and then return to SBASIC. Unfortunately, it is not possible to resume execution of a program after a chain operation.

SBASIC has a "TEXT" command which allows you to dispense with the need for a great many PRINT statements in some circumstances, e.g., when sending a screenful of information. All you have to do is type in the screen as it will appear, type TEXT followed by a delimiter (e.g., "%") in front of it and the delimiter at the end. dBASE II has a similar capability with its TEXT and ENDTEXT commands.

SBASIC, most unusually, for an implementation of BASIC, allows recursion, i.e., procedures can call themselves and new local variables are created with each call.

This feature can facilitate elegance and brevity in programming. SBASIC also features an OUT statement which can be used to send data directly to output ports. There are many built in functions for commonly used algebraic and string operations, including a string translation function called XLATE which I couldn't make do anything (nor could I determine from the documentation what it should do).

The compiler options include a trace option and the ability to include external modules from a library. An "advanced user" feature makes it possible to set the locations for the runtime stack and the load point where the runtime code is to execute.

From what I've said thus far it will be apparent that SBASIC is no ordinary BASIC. It's possible to write large SBASIC programs without a single line number. It's most unusual feature in many respects is the fact that it generates COM files! Here's the BASIC spectrum ranging from MBASIC to SBASIC:

interpreted	compiled to intermediate code which is interpreted	compiled
MBASIC	CBASIC	SBASIC
filetype:		
BAS	INT	COM

SBASIC takes forever to compile the smallest program. The error messages, etc., are all tolerably good. The speed isn't — it's unacceptable. However, it runs much faster than CBASIC.

The documentation that comes with SBASIC — it barely deserves the term — is, I think, by far the worst documentation for any software product that I have ever seen. The paper is the cheapest possible. The accessibility of its contents, both in terms of general intelligibility and "findability" is miserable to negligible. The manual also contains many errors, many ambiguities and many omissions. I could think of nothing worse to give a first-time programmer, besides no manual at all.

I wrote to TOPAZ twice asking their permission to distribute a program they give away with SBASIC to demonstrate its capabilities, (a disk editor called XAMN) but received no reply to either letter.

SBASIC might be a suitable stopover for BASIC programmers anxious to migrate to Pascal. It is exceedingly slow in compilation so that large programs cannot be developed with the same facility that they can in fast compiling languages.

On the other hand SBASIC does extend the range of what can be done using BASIC, and its structured nature should make programs written in the language more maintainable.

SBASIC would cost at least $150 if purchased from a dealer. With the likes of TURBO Pascal to compete with, at $69.95, this language is a dead duck. I strongly recommend that you don't touch this one with a barge pole. It's day has come and very quickly gone.

*[Reproduced from the **Oracle of ZEUS**, the newsletter of the independent Zorba Equipment Users' Society.]*

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TAXPAD '85

by JC Van Bloom

As a tyro, I am most pleased with the operation of Application Engineering's software package, TAXPAD '85 for the preparation of 1985 IRS tax returns.

I had no problem understanding the user's manual, all operations functioned as stated and the instructions are easy to read and understand. I am confident that the program is accurate as I have verified it with both my CPA and the IRS sample case in the 1040 instructions.

Application Engineering also has provided IRS-approved computer-generated forms and includes sufficient lined computer paper for the average individual return. The company also provides annual renewals.

TAXPAD '85 is available for CP/M and MS-DOS and the cost for either is $45. Application Engineering can be contacted at:

2238 Grey Fox Court
Orange Park, FL 33904
(904) 264-4619

Kudos to the above for a good tax program at a reasonable price.

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Grown-up Accounting for CP/M and MS-DOS

by N. Joseph Potts, CPA, MBA

If you're running accounting on an Osborne or a CP/M Kaypro, the odds are better than 50 percent that you're running one version or another of Desktop Accountant.

Rocky Mountain Software Systems has been selling the product, first as TCS Accounting and then under its current

cont. on page 20

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name, since 1981. Back in 1982, when I wanted to do accounting on my Osborne, it was the only product I could find that I felt sure would do all the accounting things a real, grown-up business needed done on my little computer with its little 90K disks.

Three-and-a-half years later, the product which originally came to me as 13 (count 'em — thirteen) Osborne single density diskettes still does a good job for my business — which has grown all the way up to being a small one — on a real, 16-bit MS-DOS computer with a hard disk drive.

And the code which makes up the 63 programs, in my copy running on a hard disk in MS-DOS, is the very same code that does the same functions in CP/M on floppies or a hard disk — a parity rarely to be found in this increasingly 16-bit, hard-disk world.

If you're interested in establishing any accounting function (Accounts Receivable, Accounts Payable, General Ledger or Payroll) on any CP/M machine, Desktop Accountant is probably your best bet just because it may be the only accounting suite which is alive, well, and supported in CP/M, and living very well in MS-DOS, too, thank you.

If your environment is CP/M now and you're planning to move to MS-DOS, Desktop is indicated even more just because it (both its programs and its data files) provide a smooth upgrade path from 8 to 16 bits.

If you are firmly ensconced in MS-DOS and you're looking to establish accounting in that environment, you have your choice of a wide range of newer products (the original code for Desktop was written way back in '75, Sonny) which may be faster, slicker, and/or cheaper, but the universality of Desktop's environments may combine with some of its other virtues to make it your choice nonetheless.

First, the landscape.

If you want to support process cost accounting for 16 profit centers with 100,000 transactions per month, 600 employees, and annual revenues over $100 million, Desktop isn't for you, even if you could figure out how to run all that in a bunch of microcomputers.

All Desktop will do is about 400. That's right — 400. Employees, customers, vendors, and general ledger accounts. I haven't outgrown these limits in three years, and it looks like I won't in the next three, but if you will and you've got the heavy hardware you're going to need, get something that'll run true multi-user in your 32-user LAN (it's out there).

But if your idea of mass storage is a 10-megabyte hard disk (or even 380K floppies), then be encouraged that 400 is Desktop's only limit. If you've got room on your disk for them, you can book a thousand transactions to each of your customers, vendors, employees and general ledger accounts and Desktop will handle them all.

Otherwise, Desktop does all four of its original functions very matter-of-factly and reliably, as you'd expect of a 10-year-old BASIC product.

Further, additional products have been added to the original line to extend its functional reach out to most of the things a small business wants to do in accounting. Examples include inventory, after-the-fact payroll, a spreadsheet interface, accumulation and printing for IRS Form 1099, and many other things.

And Desktop not only does record-keeping but also generation of documents such as invoices, statements, vendor checks, payroll checks and financial statements all the way out to departments (you can do the 16 profit centers in Desktop).

There's no such thing as an accounting suite so smart and error-proof that it can make you do valid accounting (despite the ridiculous claims made for some products), but there is such a thing as a product which makes it difficult or unlikely to provide such amenities as proper audit trails and balanced accounts.

Since I'm a CPA, I can keep my debits equal to my credits most of the time, and I make careful use of Desktop's extensive reporting and error-flagging facilities, but the proof of the pudding is a full audit by independent CPAs.

Suffice it to say that my company, after using Desktop for the past four annual closes, just underwent its first audit ever. We passed with flying colors. That's a full audit with a squeaky-clean opinion.

Rocky Mountain's advertisements for Desktop are famous for the massive amount of detail with which they crush the reader concerning the product's specific functions, so I'll try to confine this review to information that might not come to you in an ad (there's probably one somewhere in the issue you're reading this in).

Desktop is a most unusual product when viewed in totality. (There is support for a fee; Rocky Mountain's newsletter which is free for the first year, [after which time you have to pay for it], and a dealer and Expert User Consultant network providing support [yes, for a fee if I can get one — I'm one of the EUC's]).

There's also RockTalk, Rocky Mountain's free remote bulletin board service. Want to see? Fire up your modem and dial (415) 680-8993, anytime.

Rocky Mountain's approach to improving Desktop Accountant seems to be nearly unique in an industry dominated by software gurus cooking up what's best for the user in think tanks.

Desktop has a lot of users (apparently well over 10,000 counting clone brands and pirated copies) and many have been using it a long time (it's been in use for over five years). Through ***Debits & Credits*** (the monthly newsletter) and the remote bulletin board service, Rocky Mountain encourages users to send in their suggestions for improvements, and they're almost shameless in the way they've implemented well over a 100 such suggestions over the years.

In early 1986, Rocky Mountain will roll out its Version 8, which is their third major release since the Version 5 I received in 1982. It's reputed to be made up mostly of user-submitted enhancements (along with the usual less-trumpeted bug fixes).

Since every line of Desktop's code is still nakedly visible to every user (and comprehensible, too — you took a little BASIC, didn't you?), a lot of users not only code their own personal enhancements, but submit them to Rocky Mountain as

improvements, too.

Naturally, all this open code invites extensive enhancement and customizing by us EUC's and Rocky Mountain's dealers as well.

One thing to consider that might not come to mind when selecting an accounting program: Desktop is 10 tons of really professional BASIC code. As such, and as a thing which you will use and rely on everyday, it is an incomparable vehicle for learning the computer language which today is still the most widely-run on microcomputers — the good old Beginners Algorithmic Symbolic Instruction Code (BASIC).

I'll admit it — I learned BASIC from Desktop, and today I'm a good warm programmer if not a hot one.

All this universality and accessibility come at a price, of course. Desktop runs on practically any microcomputer ever built because it's written in BASIC, and interpretive BASIC can be very slow at processing whole data files, which Desktop needs to do every time you close a period (usually monthly).

To address this, Rocky Mountain offers a compiled version as a $100 option, and it steps through the files right smartly. But that does impair the malleability of the code.

As for access to master (customer, vendor, employee, G/L account) records in daily processing, that's always practically instantaneous, since all programs of Desktop which do this maintain an in-memory sort of the records to support finding by ISAM (indexed sequential access method). That's what the 400 limitation is all about.

Transaction records are always found sequentially through the master record, so finding an existing transaction can be slow where there are many transactions on disk for a particular master account, but this kind of finding affects monthly closing routines more than daily processing.

Since Desktop Accountant is such plain vanilla from a hardware standpoint, it supports only one screen function code (clear screen) and two printer function codes (compress print and normal print).

So if you have to have highlighting, underlining and reverse video on your screen, or true underscoring on your printer, it'll be tough getting this out of Desktop, but who knows? Maybe Version 9 will have these things. It probably will if enough users ask for it.

With its open and familiar code, monthly newsletter, telephone support, bulletin board, dealers and so on, Desktop Accountant is more like a lifestyle than an accounting program.

If you're an accounting department of one, it can be very nice indeed to shake that lonely feeling you get when it's just you, your computer, some disks, and a manual. And if you want a particular improvement or customization, you can buy it, make it, sell it, or even vote on it!

Desktop Accountant is available through local dealers or directly from the publisher, Rocky Mountain Software Systems, P.O. Box 3282, Walnut Creek, CA 94598-0282, (415) 680-8378. $395 for the basic four modules, plus a host of options and extensions from Rocky Mountain and third-party vendors.

• • • • • • •

SmartKey — Part 3

by Charles Sandercock

I left you contemplating how to use a mere(?) 3250 of characters to call 12K or perhaps even 100K of boilerplate.

I have on my A disk files A:@A, A:@E and A:@F, A:@PAT, A:@TM and A:@DES, for respectively, addresses, enders, formats, Patents boilerplate text, Trade Marks boilerplate text and Designs boilerplate text. The last three are too specialized to discuss in detail but part of one will be given later to show some uses of SmartKey with MailMerge.

In those files the @ serves to remind me that they are SmartKey searchable files, to collect them into the directory so as to be seen as a group and to do something special with PIP which is only applicable to 128K or more systems. You might use some other symbol or none at all. Note, it is desirable that whatever file name is used that it be a short name — this isn't essential, just desirable.

The following is a shortened version the content of the A:@F file:

```
..
..REVISED 841113
..FILE a:@F holds all formats in one file
..L1
.SV FILENAME,
..**** INSERT FILENAME PREVIOUS LINE after , ************
.. Then do ⮌
.LH 8
.CW 10
.OP
.PF ON
.OJ ON
..
.FI a:date
..
.FI b:diskname
..
.IG 6 Real ⮌ follow


.HE                                  - # -              &date&
                                                        &date&
../LETT1 START NEXT Line 8 at Cursor
..eOT
..L2
.IG form /LETT2 holds format for 2nd or later let on a file
.PA
.HE
.IG 6 real ⮌ follow


.HE                                                     &date&
                                                        &date&
../LETT2 START NEXT Line 8 at Cursor
..eOT
..auspec
```

```
.SV FILENAME.
..****INSERT FILENAME PREVIOUS LINE after . ************
.. Then do ⮐
.LH 16
.CW 12
.PO 13
.OP
..
.FI a:date
..
.FI b:diskname
..
.FO &yymmdd&.&diskname/o&.&filename/o&.
.PN 2
.HE                                    - # -
../AUSPEC START NEXT Line 1 at Cursor PLUS TAB
..eOT
..pctspec
.SV FILENAME.
..****INSERT FILENAME PREVIOUS LINE after . ************
.. Then do ⮐
.MT 6
.HM 1
.LH 12
.CW 12
.PO 14
.OP
..
.FI a:date
..
.FI b:diskname
..
.FO &yymmdd&.&diskname/o&.&filename/o&.
.HE                                    - # -
../PCTSPEC START NEXT Line 1 at Cursor PLUS TAB
..eOT
.EFeOF
```

The file A:@F ends after .EFeOF with a carriage return so that the cursor would sit in it below the "dot" of .EFeOF.

Note the following things about file A:@F:

1. It contains four formats (actually it contains more but four will illustrate the point well enough).
2. Those formats are:
   a. L1 or /LETT1. A format for the first letter on a file. It contains dot commands to suit letters and six carriage returns to "jump" over a printed letterhead. It is set up for a daisy wheel printer with a cutsheet feeder. Note that many things which could be dot commands like page offset and page length have previously been installed in WordStar using its INSTALL program. Note that we type letters at six lines/inch, 12 characters/inch and 76 column width. The latter is not apparent from @F but will be seen elsewhere.
   b. L2 or /LETT2. A format which is called into a file after /LETT1 (which has provided most of the formatting) and which is for a second letter. Principally it inserts a page break and does six carriage returns to again "jump" printed letterhead. The .HE command is interesting; particularly its positioning. /LETT2 is often used for debit notes.
   c. AUSPEC. A format for Australian Patent Specifications. I will not describe the why of it as it is too specialized.
   d. PCTSPEC. A format for Patent Specifications to an International Standard.
3. Each of the formats begins with:

   (a) "..mnemonic" such as "..auspec" and ends

   (b) "..eOT" and the file ends with

   (c) ".EFeOF".

   These are very important and are searched for with WordStar's ^QF.

   However, there is nothing mystical in what they actually are. ".." could as easily be replaced by "))" or "aa" except that both of those might perhaps be found in a text (say dealing with animals such as aardvarks). ".." has the advantage that it is equivalent to ".IG" (ignore this line for print purposes) and is, when followed by "mnemonic" a useful unique thing to search for as it is most unlikely to occur in text. Thus a SmartKey string including ^QF..>< (i.e. pause) will show on screen "Find .." and wait for input. Thus typing **L1**⮐, **L2**⮐, **a** ⮐ or **p**⮐ will cause the SmartKey string to restart and search for the first line of each format to be found.

   Having found the first line of the format I want I must eliminate what is above it (not strictly necessary for "..L1") and this is explained by reference to part of the .DTX file below. Having done that elimination SmartKey must then find the end of the format. All formats (and all other boilerplates to be found) end with "..eOT". Again there is nothing mysterious about the format.

   Having found the end of the format I must eliminate from there to the end so SmartKey causes ".EFeOF" to be found and does a block delete. ".EFeOF" is again a largely arbitrary choice to indicate the end of the file which has been read in by ^KR. The fact that it is also a WordStar "End file" statement will be explained later. It could be omitted and the search for it replaced by ^QC but since I intend to do some of these boilerplate insertions into existing text I would wind up deleting all below the wanted format or text instead of just to the end of the read in file.

   An interesting alternative to the "..mnemonic", "..eOT" and ".EF" statements would be WordStar's conditional statements such as:

   (i) (I) Ex &name& = mnemonic goto eOT
   (Here would be text to be inserted)

   (II) .EfeOT

   (III) .If &name& = mnemonic go to eOF

(ii) (Other texts to be similarly treated as in (i))

(iii) .EfeOF

This would be useful in conjunction with ".RP" where letters were to be sent to selected people using ".AV" to enter "mnemonic" but not to the extent of making it worthwhile constructing a .DF file. So far, I have only used .DF a few times as although I write to the same people quite often it is never the same thing to all of them and it is never to all of them at once. Many other alternatives to my search-find codes exist.

Note that the file A:@F starts with ".." standing alone. The reason for that is if the file is read in with ^KR with the cursor anywhere other than left margin, the first line read in may print even though it is prefixed with ".". A leading ↵ would solve the problem but would create other problems and since a spurious ".." at the top of a text is reasonably acceptable, and also enables you to work out what went wrong, I find ".." to be a good idea. Starting a search-find routine with ^Y is another way but has its risks when calling into existing text.

Each of the above formats is callable by its own specific key combination. I did this as the formats are used so much as to make this worthwhile.

The key to call "auspec" is <\8> and is reconfigured to:

```
(.8) (^Y^Or60^M^Kb^Kr A:@F^M^Qf..auspec^M^M^Kk^Ky^Qf..eOT
^M^M^Kb^Qf.EFeOF^M^M^X^Kk^Ky^Qr^X^Qd) (^Qc)
```

The combination for "/LETT1" is the same except "L1" replaces "auspec". The same applies to "/Lett2" and "PCTSPEC".

To explain what happens when <\8> is pressed I will break it up into its parts and explain:

One starts with a new file which is blank, cursor at left margin. Then activate <\8> and what happens is as follows:

^Y
(Cancels the line — gets rid of pesky leading and trailing spaces.)

^OR60^M
(Specifications are to be typed at 60 columns and this resets to 60 as a safety measure.)

^KB
(Insert block beginning marker.)

^KRA:@F^M
(Read in the file A:@F.)

^QF..auspec^M^M
(Find "..auspec" — you may need to consider "ignore case" or "second occurrence".)

^KK
(Insert block end marker.)

^KY
(Delete the block, i.e., that part of the file @F before "..auspec".)

^QF..eOT^M^M
(Find the next occurrence of "..eOT" which is at the end of the "auspec" format.)

^KB
(Insert a block begin marker.)

^QF.EFeOF^M^M
(Find the end of the file @F.)

^X
(Step down to the next line in case of trailing spaces.)

^KK^KY
(Insert block end mark and delete block, i.e., all of file @F below the format "auspec" is deleted.)

^QR
(Go to beginning of file.)

^X^QD
(Step to the second line of the file where ".SV" filename is now located, go to the end of that line. You are now in the correct position to type in the file name which, with date and diskname, will be called into a footing. After typing in the filename, do a ↵ to restart SmartKey after the pause.)

^QC
(SmartKey will now cause you to go to the end of the file ready to start typing the text of an Australian Patent Specification.)

The above sets out how the individual formats are actually called into letters.

In the bad old days, each of those formats was stored in an individual file taking up 1K each (Osborne DD) or 2K each (Osborne SD). They now all pack into one file of 2K. So, you will realize that the search-find routine saves disk space.

In the next part we will deal with calling addresses.

• • • • • • • •

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Many mourn the demise of LAIDBACK because of its reputation as a gentle and non-threatening language since all error messages were in lower case. For example, LAIDBACK responded to syntax errors with the message:

```
i hate to bother you, but i just can't relate to that. can you
find the time to try again?
```

• • • • • • • •

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GOING INSIDE

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Line Height 10 for Disk Saved MailMerge Files

by Pal Mitsem

I finally got around to creating some pretty advanced boilerplate MailMerge documents for my business, but had a disappointment coming.

Unless the microcomputer (a vanilla CP/M NCR Decision Mate 5) was hooked up to the printer (a Brother HR-15) for continuous output, I lost control of the line height parameter.

I have for years become used to Line Height 10 (4.8 lines per inch), but files saved to disk (with the "Disk Output" option in MailMerge) will come out with Line Height 8 (6 lines per inch) when printed (with the "Suppress page formatting" option).

WordStar 3.3 has an ingenious and fairly well documented installation routine and I thought it would be possible to gain control of the vertical movement of the printer through the "D — Custom Installation of Printers" option under the Winstall "Installation Menu".

I am not saying that this can't be done this way. However, the printer seemed to ignore the escape sequences that should control vertical movement according to the Brother Installation Manual. (I tried to spike the D Initialization and J Vertical Motion sequences with some of the gibberish from the Brother Manual, but to no avail.)

Looking around my bookshelf, I came across a reference to the + option to be exercised from the 3.3 Winstall "Installation Menu". The menu itself is silent about this option (asking for A/B/C/D/E/F/X input). Nor is there any mention of it in the NCR WordStar manual. In fact, this option does give access to a patch area from 100h to some 83Ah.

That left me with only one problem — I had no documentation of this patch area and I was stretching myself already. A further search around the bookshelf brought me across the ***Portable Companion*** from December 1982/January 1983 and an article by Thom Hogan (those were the good bad days) about the patch area for WordStar 3.0.

The locations are different in WordStar 3.3, but the sequence is generally the same. Poking around, I found the sequence described by Thom Hogan for 3.0 from 351h in the 3.3 patch area. (I have later discovered that the 3.3 installation program can take you straight to the label address, if you know the label, and if you are not thrown off by the use of the word "symbol" for "label".) The appropriate label is INITPF, I now see in Thom Hogan's article.

If any of you out there should be equally hung up on wide spacing between lines, here are the locations that need changing for WordStar 3.0 and 3.3 respectively.

3.0	3.3
0366	351
036A	355
036E	359
0372	35D
0376	361
037A	365

The default value at those locations is 08h, and can be changed to the value of your liking — in my case 0Ah.

There are many other parameters to be controlled in this way also, but most of them can be determined by WordStar in the file to be MailMerged and saved on disk (for my secretary to output in the same manner as most of my other documents), unlike, for some mysterious reason, line height. And even after changing the default line height, you may control it dynamically in normal WordStar usage.

[A complete listing of patch locations for WS 2.26, 3.0, and 3.3 is in WSBIBLE.DOC on FOG/CPM.004. Jack]

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John Gaudio is an electrical engineer holding two U.S. Patents on computer systems. He's been a consultant to Osborne Computer Corporation and continues to write for their magazine, the Portable Companion, Foghorn, Dog Bytes, and his own newsletter, the Survivor's Guide. Since 1981 he's been helping people get more from their Osborne Computers.

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Discover DIY: DU It Yourself Part 2

by Paul O'Nolan

In the last issue I introduced, at some length, the popular disk utility known as DU, and I said that I'd show you how to use it to salvage a disk with a damaged directory. You'll need to learn a little more about DU first. If you've followed along so far you're well on the way to becoming a first-rate do-it-yourself expert. We won't cover so much material this time, there isn't much left in fact — all you need now is practise.

Format a blank disk and copy a short text file onto it, a page or so will do fine. Put an SYSGEN'd disk with DU on it in Drive A and the new disk in Drive B. Set the default Drive to B, and invoke DU by typing:

B› **DU**↵ (↵ means carriage return).

DU will greet you with a sign-on message and await your command. The focus of our attention will be the disk directory, which we saw before resides at group 0.

When I wrote the last part of this article group 0 was at the start of track 1 and the disk was formatted using 80 sector tracks. Since then there have been some changes made to the BIOS, so that instead of having 40 tracks of 80 sectors, we now have 80 tracks of 40 sectors. The change is readily apparent if you compare the message given by the SGEN program when it is at work.

The difference is of little significance, but it does provide another example of the distinction between logical and physical. If you wrote a program which sorted the directory alphabetically and it used track and sector (physical) addresses to locate the directory it would not work with all versions of the BIOS. On the other hand if it used a group number or logical address, then it would work with different versions of the BIOS. Not surprisingly then, the first thing we want to tell DU to do is "go to group 0". Enter the following command:

:**G0**↵

and make sure you type a zero and not an Oh! You'll hear the drive spin and DU will display a message telling you where it is in terms of tracks and sectors. Now, just for fun, let's do that again. This time type:

:**QG0**↵

The **Q** tells DU to be "quiet". You'll notice that it gives no messages, it just does what it's told. You've learned another DU command, though not one of the most useful. It can help when you're trying to compare two sectors from different parts of the disk on the screen at the same time. Then you don't want any other clutter on the screen causing what you're trying to look at to be scrolled off the screen.

By the way, you shouldn't be typing in the colon shown in the examples shown above, that's DU's prompt, remember?

OK, we're at the directory track what do we do now? Type:

:**D**↵

and DU will dump the "current" sector to the screen. You should see the name of your text file there, in hexadecimal on the left and ASCII in the right hand side. Look at the first byte in the sector. It's represented by the first two hexadecimal digits in the sector at address 00. Type the following:

:**CH00,E5**↵

Now type:

:**D**↵

You'll see that the first byte has changed to "E5". Do you know what this means? You've just deleted your file! Next type:

:**+**↵

This command tells DU to advance one sector. Display this sector by typing **D** again. It looks different. If there's nothing else on the disk, and you formatted it as instructed, you'll see a sector filled with the letter **e**. Now type:

:**-;D**↵

You've told DU to go back a sector and display the sector. By now, with any luck you'll be saying to yourself: "This isn't so difficult after all." But what's this? That change we made is gone. The first byte still reads "00". The CH command we used above did indeed change the byte IN MEMORY! We didn't write the memory image of the sector back to the disk. Type the following:

:**CH00,E5;W;+;D;-;D**↵

That'll change the first byte, **W** writes it to the disk. The last four commands merely:

1) clear the sector in memory by reading in a blank one (the next one) and then;
2) reread the one we have just changed in order to verify that the change was actually written to disk.

You should now see "E5" in the first byte. Exit from DU by typing **X**↵ and then type **DIR**. CP/M will tell you "No files". Don't worry we can get it back. Type:

B› **DU G0;CH00,00;W;X**↵

and then get another directory listing. Lo and behold, there's your file, back from the dead!

Now you know how to manipulate the first byte of the directory entry, you can use DU to undelete files that were accidentally erased. This is useful is it not?

The UNERASE program doesn't always work and it never works if you can't remember the file name. With DU you can DU It Yourself! More next time.

*[Reproduced from the **Oracle of ZEUS**, the newsletter of the independent Zorba Equipment Users' Society.]*

• • • • • • •

Getting Into SuperCalc Faster

by Ron Shaw

The message Enter ''?'' for HELP or ''return'' to start always bothered me, so I found a way to skip it. I used DU to approximate its location and then DDT to obtain the actual address of the message. Back in DU, I searched for that address (again, only an approximation). DDT was finally used to change the program so that the message was not used.

With all the leg work out of the way, here's what it takes to get rid of the message. Make a copy of your SuperCalc disk and place it in Drive B. Place your system disk containing DDT in Drive A. Instructions are given for SuperCalc 1.12 and SuperCalc2 1.00. Use the appropriate column.

SuperCalc 1.12

```
A> DDT B:SC.COM
DDT VERS 2.2
NEXT  PC
5F00 0 100
-D5C90
5C90 Here you will see the
5C98 hex and ASCII dump.
5CA0 The message actually
5CA8 starts at 5C96.
etc.
-
```

SuperCalc2 1.00

```
A> DDT B:SC2.COM
DDT VERS 2.2
NEXT  PC
6F80 0 100
-D6A90
6A90 Here you will see the
6A98 hex and ASCII dump.
6AA0 The message actually
6AA8 starts at 6A94.
etc.
-
```

If the message is not here, do not continue.

```
-L5B66
5B66  LXI  D,5C96
5B69  CALL 4DF8
5B6C  CALL 2D23
5B6F  LXI  H,0496
5B72  PUSH H
etc.
-
```

```
-L68BE
68BE  LXI  D,6A94
68C1  CALL 5AC5
68C4  CALL 2FC2
68C7  LXI  H,0490
68CA  PUSH H
etc.
-
```

If the address in the first LXI is not the same as the location of the message, do not continue.

The patch is to replace the first LXI and the two CALLs with NOPs. Each instruction is three bytes long, so there will be nine NOPs when done. A NOP is what you see when zero is entered.

```
-S5B66
5B66 11 0
5B67 96 0
5B68 5C 0
5B69 CD 0
5B6A F8 0
5B6B 4D 0
5B6C CD 0
5B6D 23 0
5B6E 2D 0
5B6F 21 .
-
```

```
-S68BE
68BE 11 0
68BF 94 0
68C0 6A 0
68C1 CD 0
68C2 C5 0
68C3 5A 0
68C4 CD 0
68C5 C2 0
68C6 2F 0
68C7 21 .
-
```

In the operation above you will be typing the zeros and the period.

```
-L5B66
5B66  NOP
5B67  NOP
5B68  NOP
5B69  NOP
5B6A  NOP
5B6B  NOP
5B6C  NOP
5B6D  NOP
5B6E  NOP
5B6F  LXI  H,0496
5B72  PUSH H
-
```

```
-L68BE
68BE  NOP
68BF  NOP
68C0  NOP
68C1  NOP
68C2  NOP
68C3  NOP
68C4  NOP
68C5  NOP
68C6  NOP
68C7  LXI  H,0490
68CA  PUSH H
-
```

If all went well, you will see the display above. Even at this point, you may stop without completing the patch.

To proceed, type a ^C and you will be back at the A> prompt. Immediately, save the file.

```
A> SAVE 94 B:SC.COM↵        A> SAVE 111 B:SC2.COM↵
```

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WRITING TOOLS

If it's relevant to word processing, you'll find it here.

Quick and Dirty WordStar

by David Schlinkert

WordStar turns your computer into a word processing machine that allows you to make revisions to letters and documents without retyping them. You may have been told that WordStar is very hard to learn; I don't agree. There is a lot to WordStar, but by the time you have finished reading this, you will know enough to do most of your word processing.

Turn your computer on. Place the WordStar disk in Drive A (generally the left or top one). Place a formatted disk in Drive B. Type **ws**↵ (where ↵ means carriage return).

When the noise stops you will see the WordStar menu and a list of names. This list is the Directory for the WordStar disk. Press **L**, then **B:**↵. You will see a list of items on your disk.

To write a letter, press **D**. The letter's name can be eight characters long, a period, and three more characters. A good name might include the addressee's initials, the date, plus the subject matter. **JDS03025.FIN** would be Jane Doe Smith's final notification letter, dated March 2, 1985. It is important that the name be easy to recall. Press ↵.

You can now start typing as if you were on a typewriter: with three major differences.

* You shouldn't have to press ↵ after each line;
* You don't need to worry about margins, and;
* It is easy to make changes. Just use **DEL** or **^G** (the ^ symbol means the control key) and retype.

A word of warning: if you use a small **l** (ell) for a **1** (one) or an **O** (capital O) for a **0** (zero), you will have problems with any computer, because computers can tell the difference!

Unfortunately computer keyboards lack all of the extra keys found on dedicated word processing machines. This makes it necessary to use the ^ key to tell WordStar what to do next. ^ is like the **SHIFT** key; it changes the meaning of a key. So **^K means hold the** ^ down and press **K**. These ^ functions make WordStar very useful.

Now **SAVE** the letter. Press **^KD**. The letter is written onto your work disk and you are back to the first menu.

To print a letter. Look for it on the Directory list, if you need to be certain of the spelling (no directory? Press **F**). Press **P** and type the name of the letter. Press ↵ for each question until you get to STOP BETWEEN PAGES?. Press **Y** if you want to use single sheets of paper or **N** if you have "computer" paper. Printing will start. Press **P** to start a new page, if you chose that option.

So far you haven't done anything you couldn't have done faster on the typewriter.

So why bother with WordStar?

Because no matter how good a job you do the first time, someone will want to make changes!

Now the good part!

Typing a rough draft in WordStar is harder than doing it on a typewriter — at first — BUT making changes and revisions is easier.

Press **D**. This time type the same name as the last time. WordStar recalls your letter and lets you make changes. To make corrections move the cursor box (or underline) up to the place where the error is located. The cursor is moved using ^ commands thus:

Up a line	**^E**
Up a screenful	**^R**
To the start	**^QR**
Word left	**^A**
Letter left	**^S**
Letter right	**^D**
Word right	**^F**
Down a line	**^X**
Down a screenful	**^C**
To the bottom	**^QC**

Once the cursor is over the error decide if you want to write over it or insert something. To add something look in the upper right corner of the screen. If you see INSERT ON just start typing, WordStar will move everything over. If INSERT ON isn't visible, press **^V** and it will appear. To write over things the insert must be off. Press **^V** if INSERT ON is visible. The **SPACE** bar will erase things! Don't use it to move the cursor.

Three ^ keys remove things: **^G** removes a letter, **^T** removes a word and **^Y** removes a whole line. (Careful! **^T** and **^Y** are close together.)

You now have a letter that has funny margins. To fix them, move the cursor to the beginning of the paragraph and press **^B**. The margins will be fixed. If WordStar stops before the end of the paragraph one of two things has happened: either it wants to hyphenate a word (press - if you agree, **^B** if you don't) or there is an extra ↵ in the paragraph. In the second case look at the right side of the screen. Is there a < there? If so, press **^S^G** to remove it and **^B** to continue reformatting the paragraph. If you don't want the Hyphen Help, press **^OH**.

Say you need to change the name of the client in the letter. Rather than searching for each time the name appears and retyping, you press **^QA**. Type what you want changed, then ↵. Then type the new name, ↵.

Press ↵.

WordStar finds the first occurrence of the name and asks you if you want to change it. Type **y** or **n**. Press **^L** for the next one. If you are 100 percent certain that you want ALL occurrences of the name changed you could type **GNU** at the option line. This will replace all instances of the old name name with the new name. I recommend saving the letter with **^KS** prior to making a major replacement. Then you can escape with **^KQ** if you realize the change was too extensive. **^QF** will find a word for you.

Special effects: underlining, **bold letters**, and such all start with **^P**. These effects must be shut off by repeating the command. A menu which tells you all of the options appears after the **^P** is typed.

Margins, line spacing, centering, etc., start with **^O**. Moving paragraphs, pages and even columns start with **^K**.

Tables: typing **.UJ off** at the left margin before tables will keep them lined up when printed. This is a **dot** command. Type **.uj on** after the table is finished to go back to justified margins.

• • • • • • •

Achieving Centered Headings with Alternate Page Numbers in WordStar

by Norm Dresner
CompuMagic, Inc.

Of all the things I've done with computers, nothing approaches witchcraft as much as getting WordStar to print out page headings with centered text and alternating page numbers. Either of these alone is easy — almost bordering on trivial — but doing the two together is something else.

First a quick review of the basics.

Headers

WordStar can put a heading on each page of the printout if you use the **.HE** command.

Like all dot-commands, it must start in column 1; everything after the .HE is text to be printed as the page heading.

Getting a centered heading is easy: you just type the text you want on a line, all by itself, center it with **^OC**, then move the cursor to column 1, and then insert the characters **.HE**.

For the heading to print on the first page, the .HE command must occur before the first line of text.

Alternating Page Numbers

A picture says it better than a kilobyte:

```
-----------------------------
¦ 2                       3 ¦
¦                           ¦
¦                           ¦
¦                           ¦
¦                           ¦
¦                           ¦
¦                           ¦
¦                           ¦
¦                           ¦
-----------------------------
```

Alternating page numbers are used when the final copy is two-sided. WordStar even provides a means to get alternating page numbers!

First, a review of how to get page numbers anywhere but at the "center" of the bottom of the page.

WordStar's default (if you don't change it with the install program) is to number every page, and to put the page number in the middle of the footer line (the footer is to the bottom of the page as the header is to the top).

To tell WordStar not to do this requires only a **.OP** (as in Omit Page numbers) command somewhere near the start of the file.

Where can you put the page number? You have your choice of putting it in either the header, or the footer line, but you must tell WordStar where to put it.

If you want to put it in the header line, you have to use a **.HE** command to specify that you want a heading, and you use a special character, # — the number character — to specify where in the heading line you want the page number. For example, the line:

```
.HE #
```

starts the page number in the second printable column of the heading, and:

```
.HE                                                          #
```

puts it fairly close to the right margin.

To get alternating page numbers takes another special character, a **^K** (control K) — which you enter as **^PK**. The **^K** is placed where you want the even page numbers (left side pages) to go, and the # is placed where you want the odd page numbers (right side pages) to be, like this:

```
.HE ^K                                                       #
```

You can have nothing but spaces between the **^K** and the #. To get the page number at the bottom, you'd use **.FO** instead of **.HE**.

Achieving Both

To get alternating page numbers and centered headings, I first tried to use WordStar's method for overprinting lines.

This works as follows: If you want one line to "overprint" another (see below for possible reasons), you terminate the first line with **^PM** and then just type the second line normally.

This is usually used when MergePrinting onto a form with data that is variable in length. Suppose you had to print two fields on one line: a name to start in column 1; an address, in column 25. You might try to set up the MergePrint-file as:

```
&NAME&                    &ADDRESS&
```

BUT . . . even though you were careful to make the "&ADDRESS" start in column 25, the actual name isn't going to be exactly the same length as "&NAME&", so the column in which the address starts will shift with the length of the name.

The solution to this is to enter it as two different lines:

```
&NAME&^PM
                          &ADDRESS&
```

When you type **^PM**, WordStar will just put a - in the right edge of the screen. It is it's way of telling you that the next line will overprint this one, and the address will start in column 25.

That does work — except in headings and footings; we get the alternating page numbers, but no text!

The next approach I tried worked, but only after considerable experimentation.

The basis of this method is that there is a simple way to get WordStar to overprint a single character. In fact, some characters are impossible to get except by overprinting. An accented letter (in French, for example) can be easily produced by printing the letter and then overprinting the appropriate accent mark. For example, **a la mode** is done by typing an **a**, then **^PH**, then the **accent mark**.

The **^PH** tells WordStar to overprint. (Technically, **^H** is the ASCII backspace.)

Similarly, an acceptable substitute for the Japanese Yen sign can be done with a **Y** and an equal sign thus: ¥.

This method is usually used to overprint only a single character, but I use it to get the printer to back up all the way to the left margin! First I'll present the technique, then I'll try to explain it.

```
.OP
.HE ^K                                                    #
^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H
^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H^H
^H^H                    CompuMagic UTILITY PACKAGE
```

The **.OP** simply tells WordStar not to put page numbers in its usual place. The **^K** and the **#** in the .HE line were described above.

The real trick is that even though this is printed here as many lines, you actually enter it as a single line. Immediately following the **#** you start entering **^PH**'s.

For each one you type, WordStar displays **^H** and its column counter actually goes down! In this example, by the time you'd type the last **^H**, WordStar's COL xx display on the top of the screen would actually read COL -01!

How this works on an odd numbered page (a right hand page) is obvious: after putting the page number on the extreme right side of the page, it just backspaces to the left margin, then prints the centered heading. What makes this work for an even numbered page (a left hand page) — I guess — is that the printer doesn't mind getting extra backspaces that would drive it beyond the stops and just ignores them.

The reason I drove the column counter to -1 instead of stopping at 0 is that the **#** sign signifies the start of the page number, but when I'm using two-digit pages, the printer actually gets one column further than the **#** sign so I have to back up the extra character as "insurance".

The exact number of **^PH**'s that are needed to get the heading positioned just-so are only determinable by experiment.

If the last few characters of the heading are missing, it means — at least it has for me — that there are too many **^H**'s; simply reducing the number of them brings back the missing characters.

This was great, BUT... I needed, not just text in the heading, but boldfaced text. WordStar uses two methods of overprinting — not just for explicit overprinting like the MergePrint example above, but also for doing double-strike and boldface. The two methods are:

1. Overprinting by backspacing. For each character to be overprinted, WordStar prints the character, then sends a "backspace" character to the printer and then prints the overstrike character.
2. Overprinting by doing a carriage return without a line feed. In this method, WordStar prints the first line, then sends a carriage return (which causes the printer to start at the beginning of the current line) but WordStar doesn't send a line feed — the character that causes the printer to advance to the next line. Then WordStar transmits the overstrike line.

Not all printers can backspace, so if you have a dot matrix printer, the default setting (from the install program) is a "dumb" printer that can't backspace. I've found that having a printer that can backspace is, other than this, no advantage: double-strike and boldface work much faster with the carriage return method.

I'm not completely sure where the fault is — in WordStar or in the Epson — but I can get boldfaced heading text with alternating page numbers using backspacing, but not with the carriage return method.

I don't know if the authors of WordStar ever intended for us to be able to do this, but it really enhances the appearance of reports and documentation.

• • • • • • •

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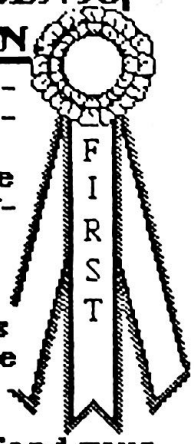

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Processing with REFERENCE

by Glenn Borchardt

[The writer is also the author of this program, REFERENCE. In some cases the author of a program is the best person to describe the program's functions.]

Without my references I am nothing. Like other non-fiction writers, I live and breathe the past — the work that others have already done in my field.

Unfortunately, after 20 years of scientific research, I have been inundated with thousands of 8" x 5" index unisort cards.

In this article I describe how the Osborne computer, along with a computer program that I wrote, has replaced those cards, the punches and needles required to retrieve them, and the typewriters that were necessary to type them, and retype them, and retype them . . .

Not only can the computer store and retrieve information about references, it can process it to suit the demands of almost any publisher.

Non-fiction writers know that there is little agreement among publishers on which reference style should be used for documentation. A particular publisher can demand a disgusting degree of nit-picking detail — each comma, period, and parenthesis must be in exactly the right place, but the publishing industry as a whole is in disarray. One wants it: author-date-title, another wants it: title-author-date; one wants it with page numbers, another wants it without.

Scientific specialists refer to certain books and journal articles (especially our own) over and over again. We submit our works to a variety of publishers to get the widest possible distribution of our ideas.

Any non-fiction writer who has ever received a rejection slip knows that resubmission to another publisher, at minimum, entails rearrangement and retyping of the bibliography.

On top of this, every submission requires extra-careful proofreading — an incorrect volume or page number can force your reader on a frustrating and ultimately futile search.

Now you can eliminate these documentation headaches and be freed for more creative pursuits.

Below I describe how my computer program, REFERENCE, solves the style conversion problem along with the usual problems involving data entry and retrieval.

Notes and Quotes

The first step in a research program is usually a visit to the library. Here the advantages of the computer are obvious — you only need the appropriate electrical connection or battery pack. Imagine the number of references and notes you could accumulate in a day's work once you got used to the extra attention sure to accompany your first visit!

If you've tried any of the old card sort systems for keeping track of references you know how complicated some of them can be. For example, any system that searches only on the basis of previously designated "keywords" is sure to be time-consuming and cumbersome.

The last thing I want to do at the library is to think up a bunch of keywords just to satisfy the demands of a computer. I especially don't want to be limited in the amount of file space I can use for taking notes.

The best reference-handling setup actually must be a complete study system. It must store the appropriate information and still be easy to use. Let me point out some of the details so you can get an idea of how REFERENCE does it.

REFERENCE allows seven flexible fields for each reference (or record):

Record divider: *
Line 1: Authors' names
Line 2: Date
Line 3: Title
Line 4: City: Publisher or Journal name
Line 5: Number of pages or volume: inclusive page numbers
Line 6: (Optional): Keywords for fastest search
Line 7+: (Optional): Notes

The record divider is simply an asterisk in column 1. Lines 1 through 5 each contain up to 254 characters and end with a ↵ (carriage return). Whether the document was written by one person or 20, the names all fit on one line.

Thus there is no need to worry about fixed fields for the author's first and last names or for additional authors. The computer later distinguishes between these by evaluating comma placement.

REFERENCE handles style conversions by classifying references into one of these categories: BOOKS, CHAPTERS, JOURNALS, or NEWSPAPERS.

Thus if line 5 ends with a "p", the reference is handled according to the rules for citing books. If line 5 begins with a "p", the reference is handled according to the rules for citing chapters. If line 5 contains a colon, the reference is handled according to the rules for citing journals and the program assumes that the characters before the colon are volume numbers and that those following the colon are page numbers. Data can be entered either with the help of the prompts supplied by REFERENCE or with the help of the editing features of WordStar or any other word processor.

Each reference may include as many optional lines of notes and quotations as the diskette will hold. All lines within a record, including all the notes, are amenable to the data search and retrieval routine.

If you take few notes, up to 1000 references can be stored on a double density diskette. The master file can be used to produce smaller files by subject, author, publisher, etc. The notes and quotes are readily accessible to further editing and may be transferred to the documents you have in preparation. In short, reference information, once entered into the computer, need never be typed again.

Resurrection and Writing

Library visits typically produce many times the information pertinent to a particular writing project. Topics have to be narrowed, subtopics have to be outlined, and key ideas have to be found. In the bad old days I would search for hours to resurrect a fact or figure that I just knew I had on one of several

thousand note cards. Often, I gave up.

Today, with the computer and REFERENCE, every note I take is retrievable within seconds. I can compile a list of pertinent references from my old research notes even before I have more than a vague idea of what the next topic will be. All this is done with the program's data search facility, best illustrated by the screen display:

```
------------------------------------------------------
|                                                    |
|If you do not have an answer to any one of these,   |
|press RETURN.                                       |
|                                                    |
|SENIOR AUTHOR'S LAST NAME?                          |
|SENIOR AUTHOR'S FIRST NAME OR INITIAL?              |
|JUNIOR/SENIOR AUTHOR'S LAST NAME?                   |
|JUNIOR/SENIOR AUTHOR'S FIRST NAME OR INITIAL?       |
|YEAR OF PUBLICATION?                                |
|FIRST KEYWORD OR PHRASE?                            |
|SECOND KEYWORD OR PHRASE?                           |
|THIRD KEYWORD OR PHRASE?                            |
|FOURTH KEYWORD OR PHRASE?                           |
|FIFTH KEYWORD OR PHRASE?                            |
|                                                    |
------------------------------------------------------
```

A data search for more than one item yields two possibilities:

1. The search may be inclusive, that is, if item A or item B is found in a reference, it will be retrieved.
2. The search may be exclusive, that is, if item A and item B are found in a reference, it will be retrieved.

An inclusive search includes as many references as possible, while an exclusive search excludes as many as possible. You can use inclusive searches to prepare a reading list before writing an article. You can use exclusive searches to find a particular reference — usually by author and date or a word or phrase that you can remember from the title or notes.

Thus typing "1972" in response to the question about the date of publication will yield displays of all references published in 1972. With an inclusive search, also typing the word "correlation" in response to the question about the first keyword yields all references having the word "correlation" or the date "1972". With an exclusive search, only articles having both "1972" and "correlation" would be retrieved.

Preparing the final bibliography for an article is simple. I make up a unique code word and include it in line 6 of each reference I want to publish. Thus if the title was: "The processed reference", the code word would be: "TPR". An automated search of the master file produces an alphabetized list of only the references to be published with this particular article. The code word remains as a permanent record indicating which references were published with which article.

Reference Style Conversion

After the data search has proven successful, you may produce subdivided master files, do quick conversions to one of six widely varying reference styles, or produce your own reference style with the USER OPTION:

```
------------------------------------------------------
|                                                    |
|Here are your choices of REFERENCE STYLES:          |
|                                                    |
|A = 6-line reference file same as the INPUT         |
|B = Authors, Date, Title: Journal, v., p.           |
|C = Authors (Date) Title: Journal                   |
|D = Authors, ''Title,'' Journal, Date               |
|E = Authors. Date. Title. Journal                   |
|F = Authors (first name first), Journal (Date)      |
|U = USER OPTION                                     |
|                                                    |
|Which do you choose?                                |
|                                                    |
------------------------------------------------------
```

Thus the reference to a journal article that you entered in this way:

Borchardt, G. A., Aruscavage, P. J., and Millard, H. T., Jr.
1972
Correlation of the Bishop ash, a Pleistocene marker bed, using instrumental neutron activation analysis
Journal of Sedimentary Petrology
42:301-306

Can be converted to reference style B:

Borchardt, G. A., Aruscavage, P. J., and Millard, H. T., Jr., 1972, Correlation of the Bishop ash, a Pleistocene marker bed, using instrumental neutron activation analysis: Journal of Sedimentary Petrology, v. 42, p. 301-306.

To reference style C:

Borchardt, G. A., Aruscavage, P. J., and Millard, H. T., Jr. (1972) Correlation of the Bishop ash, a Pleistocene marker bed, using instrumental neutron activation analysis: Journal of Sedimentary Petrology 42, 301.

To reference style D:

Borchardt, G. A., Aruscavage, P. J., and Millard, H. T., Jr., "Correlation of the Bishop ash, a Pleistocene marker bed, using instrumental neutron activation analysis," Journal of Sedimentary Petrology, 42, 301, 1972.

To reference style E:

Borchardt, G. A., Aruscavage, P. J., and Millard, H. T., Jr. 1972. Correlation of the Bishop ash, a Pleistocene marker bed, using instrumental neutron activation analysis. Journal of Sedimentary Petrology 42:301-6.

Or to reference style F:

G. A. Borchardt, P. J. Aruscavage, H. T. Millard, Jr., Journal of Sedimentary Petrology 42, 301 (1972).

If your publisher will accept one of the above styles, you are especially lucky. It will be unnecessary for you to study them

in detail — that has already been done. With a single keystroke, references you entered with last names first, as preferred by most publishers, can be converted to references with first names first, as preferred, for example, by the journal, Science.

But suppose the reference style you want is not among the above, what do you do then?

REFERENCE includes a program to handle this problem. You simply answer a series of detailed questions about the order, capitalization, and punctuation of the different elements of the reference style you desire. Once entered, this information is saved on a disk file, and is available to convert references at any time thereafter. The number of reference styles you can make up is unlimited.

I have used REFERENCE to prepare error-free bibliographies containing up to 295 references. My data searches now take seconds instead of hours, I've forgotten what proofreading is, and my secretaries admit that they never liked typing references anyway. No question about it, the spindled and mutilated unisort card has been replaced by the processed reference.

Bio Notes

(Glenn Borchardt is a scientist with the California Department of Conservation. REFERENCE is available for all CP/M computers having MBASIC. The cost is $99.95 + $3.00 handling from DYNACOMP, Inc., 1064 Gravel Road, Webster, NY 14580, (800) 828-6772).

• • • • • • •

Multiple Copies, and the "Yankback" in WordStar

by Author Unknown

[This is a good and useful article but we don't know the name of the author. Regularly we receive disks in disk mailers with no name or return address and no hint of the author in the file/s. If you haven't received a disk back from us, this very likely is the reason. We NEED every submission to include the author's name and return address, please. We'd like to lose "Author Unknown" from our contribution list. Joanne]

WordStar is the most powerful word processor ever developed for CP/M computers. It's hard to learn, though, because you have to memorize so many multiple-keystroke commands. In addition, it lacks two of Perfect Writer's capabilities:

(1) WordStar can't print multiple copies and;
(2) Block-deletes can't be "yanked back": once you delete something from WordStar, it's gone forever.

If you can't find at least five errors in that statement, you're not trying.

The multiple-copy canard, for example, is so often repeated that you'd think nobody had ever seen MailMerge. If you've seen it (as a file on your WordStar disk that's called MAILMRGE.OVR), then all you have to do to print multiple copies is type **M** (instead of P). You will be presented with a dialogue that's exactly like the customary printing dialogue, except for the fourth question, Number of copies.

And if you don't have MailMerge? In that case, the only program you'll really need is an interactive batch-processor like EX14.COM, a public-domain utility (FOG/CPM.010). Copy it to your WordStar disk, put that disk in Drive A and the file you want to print in Drive B, and bring up CP/M's A> prompt. Then turn your printer on and type the following, substituting the actual name of your file for **FILENAME.EXT**:

EX14↵
WS↵
P B:FILENAME.EXT<**ESC**>↵
P B:FILENAME.EXT<**ESC**>↵
X↵

That will print two copies of FILENAME.EXT. If you want three copies, add another repetition of **P B:FILENAME.EXT** <**ESC**> ↵. And so on.

The WordStar Yankback

To be able to recover from a bungled block-delete in WordStar you must make it a habit always to save your text (**^KS**) before issuing the block-delete command (**^KY**). Then if you find that you've deleted something you wanted to keep, all you have to do is abandon the file (**^KQ**), which will return you to the Opening Menu, from which you can then call the file back exactly as it was the moment before you carried out your ill-fated deletion.

That's all well and good, but of course the very absentmindedness that led you to mark the wrong passage for deletion in the first place, is just as likely to make you forget to save the file before doing a block-delete.

That's why you'd be better off using a key-definition package like SmartKey or Backgrounder to automate the whole process, by defining two special keys as follows:

BLOCK-DELETE	UNDO
^KS	^KQ
^QP	Y
^KY	D
	^R
	↵

Mark the block in the usual way, but execute the actual deletion by pressing your new Block-Delete key. If the results distress you, press the new Undo key immediately and the missing text will be yanked back, almost as if you were using Perfect Writer.

A word of caution, however: be sure to locate your Undo key someplace where you'll be unlikely to strike it by accident. You can recover from a block-delete now, but a careless yankback can still do you in.

• • • • • • •

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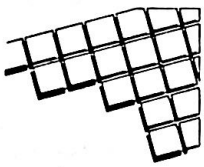

Then develop your ideas using a familiar outline format. Change the structure as easily as you change your mind. Move an idea and all attached text moves with it.

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RUN THE NUMBERS
All about spreadsheets.

Project Management with SuperCalc

by K. Vasudevan

Introduction

Project Management programs are specialized programs designed to help estimate and track resource requirements, progress, completion, and costs.

Here is a SuperCalc project management system to experiment with. We shall attempt the more commonly used device of project management, the Gantt chart.

The example project is to prepare an advertisement for publication. I use SuperCalc v1.12.

Plan the Project

A project is first broken down into its component tasks for analysis. This then is the basis for the Gantt chart. Each task is defined by its dependency (dig the hole, then erect the pole), duration, and resources (who does the task?).

In this simple project assumptions are made that may limit its usefulness. Each task is dependent on only one prerequisite task; duration is in days, precalculated, and reflecting the resources allocated to the task. Cost has been left out.

	A	B	C	D	E	F
1		GRANT LEE TRUCE Inc.				
2		Advertisement for Mason Dixon Comp.				
3						
4	Task	Name	Dep.	Who	Strt	End
5	1	Client Input		a,c	1	1
6	2	Develop Schedule	1	b	1	3
7	3	Market Research	2	a,b	4	7
8	4	Dev Ad Strategy	3	a,b	8	14
9	5	Strategy Approval	4	c	15	16
10	6	Concept,Copy,Artwork	5	b	17	27
11	7	Client Preview	6	abc	28	28
12	8	Revisions	7	b	29	34
13	9	Client Approval	8	abc	35	35
14	10	Typeset Copy	9	a,b	36	40
15	11	Paste Up	10	b,d	41	46
16	12	Final Approval	11	abc	47	47
17	13	Print Production	12	d	48	51
18	14	Ship to Publishers	13	d	52	52
19						
20		a-USGrant b-RELee c-Client d-ERTruce				

Figure 1a

Track the Project

Although it is enough to create columns of numbers as the result of calculations, graphical representation helps visually track the project. Columns H through BK have a width of 1. H4 through BK4 are initialized with constants 1 to 56 for the days of the project (they will not show up in a 1 column cell). The formula is simple. Enter in cell H5:

IF(AND(E5<=H4,F5>=H4),0,10)

First replicate over the range H6:H18 varying E5 and F5, then replicate the formulas across the columns varying H. (You should have **IF(AND(E15<=AJ4,F15>=AJ4),0,10)** in cell AJ15).

To economize on memory usage, I blanked out the top right and bottom left areas.

```
   ¦ G¦
 1¦
 2¦
 3¦Days.....1.....2.....3.....4.....5...
 4¦  )
 5¦  : 0
 6¦  : 000
 7¦  :   0000
 8¦  :       0000000
 9¦  :           00
10¦  :             00000000000
11¦  :                       0
12¦  :                     000000
13¦  :                          0
14¦  :                        00000
15¦  :                             000000
16¦  :                                  0
17¦  :                                 0000
18¦  :                                     0
19¦
20¦
```

Figure 1b

The advantage here over manually filling in the activity "bars" with #'s is that you let SuperCalc calculate the changes, and watch as the changes cascade down the Gantt chart automatically. This becomes important when you have 40 activities, not 14!

The disadvantage is that I have used up all 64 columns (56 for the 56 days).

A spreadsheet that allows more than 64 is one solution. Another is to use a column width of 7 denoting 7 days and devising a formula that works. (A display trick may be needed, such as 111000 to mean positions 1, 2, 3 are to be ignored, and 4, 5, 6 show the task.)

Enhance the Project

Instead of the start and end values input, you may want to input only the task duration and let SuperCalc calculate the start and end, given the project start date. A column with number of people on a task, duration in man-days, labor rate, and appropriate formulas may be used in order to do "what if"

analyses with these two important results:

i) The progress and completion of the project;
ii) The cost of resources (material and people).

Juggling dependencies, if your project allows it, is another tool to alter finish dates. And one could output to disk to improve presentability via WordStar, such as replace the 0's making up the Gantt chart with more meaningful characters — **M** for a milestone, = for normal activity, ? indicating activities of uncertain duration, # for completed items, and so on.

With some imagination, you can refine the system to fit your needs easily — be it differential labor rates based on skills of personnel; multiple projects; or employee assignment; the list goes on.

Later versions of SuperCalc are certain to be more useful in this attempt!

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SIN and COS in SC2

by David Ibbetson

Over the years I have met four different ways of representing an angle theta in computer programs. The circle may be divided into 360 degrees, 2*pi radians, 2 "straight-angles", or 400 grads. I suspect there are others.

As a further complication there are various ways of subdividing degrees:

* Originally they were subdivided into 60 minute parts (or as we now say, "minutes") and each of these were, if necessary further subdivided into 60 minute parts of the second order; "seconds". In theory this subdivision would be carried on into 60 minute parts of the third, fourth, etc. orders, but I've never met this in practice. With this system an angle just less than 20 degrees would be expressed as $19^{0}59'59''59'''$ etc.

Nowadays it is fashionable to switch, at some point to decimal subdivisions, so that this angle might be expressed as 19.9999 degrees, or as 19 degrees and 59.9999 minutes, or 19 degrees 59 minutes and 59.99 seconds.

SC2 measures angles in radians. Chris Berthaut (December 1985 ***FOGHORN***) seems to have measured his angles in decimally divided degrees. As I haven't been able to duplicate his value of 0.6031 I'm not sure what he used, but decimally divided degrees give 0.68 and come closer than grads. If I'm right he should replace expressions like SIN(F6) by SIN(F6*PI/180).

Straight angles, as I call them are much favored by programmers who are unlucky enough to handle angles in fixed point arithmetic.

With 16 bit arithmetic, for example, instead of thinking of integers in the range -32767 to +32768 we can think of fractions in the range -32767/32768 to +32768/32768 (which is, of course, +1) and when thinking of angles, if we go outside this range, neglecting overflow is equivalent to neglecting whole revolutions, which we usually want to do.

The following table may help the confused:

To convert from:	to:	multiply by:	this is about:
degrees	radians	pi/180	0.0174532
degrees	grads	100/90	1.11111
degrees	straight angles	1/180	0.005555556
radians	degrees	180/pi	57.2958
radians	grads	200/pi	63.6620
radians	straight angles	1/pi	0.31831
grads	degrees	90/100	0.9 exactly
grads	radians	pi/200	0.015708
grads	straight angles	1/200	0.005 exactly
straight angles	degrees	180	180 exactly
straight angles	radians	pi	3.14159
straight angles	grads	200	200 exactly

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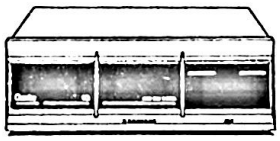

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Writing a SuperCalc Program Using LOOKUP and IF Expressions (SC1.12)

by Peter Dodwell

Introduction

It seems to be quite common in computer users to let one or two of their "free" software packages blush unseen, while they stick to their favorites for months. For many users, one of these flowers, wasting its fragrance on the desert air, is SuperCalc. Yet it has great values as a labour saving programming tool. If unfamiliarity with its basic simplicity prevents you from taking the plunge, this example of how I used it recently may help.

When deciding to use any computer program, essential questions to ask are:

1. Will it save me time?
2. Will it do something that otherwise would be difficult or impossible?
3. For SuperCalc, (call it SC, for short) the final question to remember is: Will this task involve arranging material in table form, or would it be enhanced by doing this?

Obviously, the timesaving question MUST take into account the time spent (or wasted?) in developing the program. Here, SuperCalc has an advantage over many programming languages (YES, it really IS a programming language). It is so simple and structured, that you scarcely notice that you are learning a language, since it uses familiar forms, and handles conventional maths. You will pick it up far quicker than you took to learn the details of WordStar. But you must have a good understanding of any mathematical processes which your task will involve.

In choosing a task that permits a program to save you time, the obvious candidate is a very tedious, repetitive task. This also makes it easier to justify time spent on program development. If it is a repetitive task requiring precision, then your computer will definitely be saving your sanity while probably doing a better job!

The example here was developed in conducting a survey of hearing loss in the players of an orchestra. Working with a nurse (who would conduct the actual hearing test), I was going to have to interpret the resulting audiogram for a total of about 70-80 people (plus some repeats).

Since the survey was in response to concern expressed via their committee to the management, it was clear that each player was likely to be keenly interested in what the test showed. A clear on-the-spot printout which each could take home would be an advantage, but it would need to be more than the usual simple graph we use (since this is a complex thing to interpret, and misinterpretation was the last thing we needed).

Two essential points that must be allowed for when interpreting each audiogram (particularly for the older players) are their age, and how much hearing loss would be reasonably normal for a person of that age. This necessitates either considerable experience as an ENT specialist, or the looking up of prediction figures from fairly complex tables. These would be difficult to explain briefly to each player. And the possibility of errors in looking up results would be quite high.

All these reasons seemed to me to justify the use of a custom-built program.

The Program

I will discuss this in three parts, in what may seem the reverse order (in terms of development).

1. What the program does.
2. How it works.
3. How was it built?

What the Program Does

Table One is a sample printout, as received by the player after the audiogram. The audiogram represents (for selected frequencies) the faintest sound which the person was JUST able to hear (two out of three times). The printout has an explanation built-in (the footnote). You should read this footnote now.

In use, this very same table appears on the screen. This is inherent in SC — that every item you write into the program has a corresponding "niche" (called a cell) on the screen display and on the printout. You arrange these items on a grid which is indexed like a huge chessboard.

There is a Male and a Female table, but only the former appears in these examples. After choosing the appropriate one, the user only alters a few items for each person: name and age group (at the top), and the two-left hand columns of the actual hearing "loss" readings of the audiogram.

If a certain frequency is not tested, (e.g., 250-2000 here), then you enter NA. This is automatically echoed (a standard SC function) wherever the program uses these figures in its formulae.

I chose to leave NA as a "default" value for most of my cases: a very easy thing with SC. Anything you write remains there until you overwrite it.

You can "protect" a cell to prevent accidental overwriting. In this case, I protected these cells, and saved this setup as my working spreadsheet. So the defaults are set whenever I load the program.

After entering new values, the user then presses **<shift>!** and the program recalculates all formulae. It can then be printed out. The whole process takes less than one minute. A refinement is to have two mini-programs (SC "Command Files" in versions 1.12 and later) to save you typing in a lot of detail each time you wish to print a table. This has the advantage that you are less likely to print the table of the wrong sex inadvertently, since each command file can be named usefully (here, I used M and F; see Table Two). This way, you can command a printout with five keystrokes, for instance:

/XM.↵

How It Works

If you look at Table Three, you will see the display structure

cont. on page 44

CALENDAR

Under this heading you will find the listing of activities and events of Affiliated Member Organizations. Listings are the responsibility of the groups' officers. Officers must have corrections into FOG office by the first of the month prior to publication (December 1st for the January issue). For a list of other groups, see ***"CONTACTS"*** in back issues starting January, 1983, or send a stamped, self-addressed envelope to the FOG offices. Please include a note with your geographical area. To verify the meeting date, time, or location, call the number in the right hand column.

Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Jun 19	Soldotna, AK	18-PenFOG	3rd Th	7:00pm	Kenai Peninsula Community College	907-262-5801
Jun 16	Anchorage, AK	63-GUIDE	3rd M	7:00pm	Mountain View Library	907-276-6484
Jul 10	Sitka, AK	83-BUG	2nd Th	7:30pm	Human Services Center, 207 Moller Dr.	907-747-8615
Jul 8	Ketchikan, AK	89-KCPM	2nd Tu	7:00pm	1182 Black Bear Road	907-225-9249
Jun 28	Homewood, AL	49-FAOUG	last Sa	1:00pm	Homewood Public Library, 1755 Oxmoor Road	205-669-4396
Jul 10	Huntsville, AL	125-NAOUG	2nd Th	7:00pm	First American Federal Savings & Loan, 4008 University Drive	205-881-0377
Jul 10	Ft. Smith, AR	23-AFOG	2nd Th	7:00pm	Lewis Paint and Supply, 4900 Wheeler Avenue	501-785-0820
Jul 1	Tempe, AZ	100-TOG	1st Tu	6:30pm	Tempe Public Library, Pyle Adult Center, Southern Ave at Rural Rd	602-969-2074
Jun 25	Stockton, CA	11-SOG	4th W	7:00pm	Citicorp Savings, 1810 Pacific Ave.	209-951-4701
Jul 14	Fresno, CA	35-FROG	2nd M	7:00pm	1434 West Shaw, Suite A	209-683-2252
Jun 26	Porterville, CA	66-SVFOG	4th Th	6:00pm	1502 North Lowery	209-781-4123
Jun 18	Long Beach, CA	130-OPEN	3rd W	6:30pm	C.S.U., Learning Assistance Center	213-498-4186 x 5350
Jun 3	Campbell, CA	1-1st FOG SV	1st Tu	7:30pm	Campbell Public Library, 30 North Central	408-371-8699
Jun 19	Cupertino, CA	1-1st FOG SV	3rd Th	7:30pm	Cupertino Public Library, 10400 Torre	408-371-8699
Jul 11	Castroville, CA	5-MBAOCUG	2nd F	7:00pm	Castroville Fire Station, Rec Room, Speegle & Pomber	408-728-1416
Jun 26	San Francisco, CA	2-SFCS	4th Th	7:00pm	St. Aidan's Church, Goldmine & Diamond Hgts.	415-929-0252
Jul 9	Oakland, CA	3-East Bay FOG	2nd W	6:00pm	B & B Electric, 2832 Ford Street	415-272-9099
Jul 8	San Rafael, CA	31-MOG	2nd Tu	7:00pm	San Rafael High School, 2nd Street	415-897-0629
Jun 18	Walnut Creek, CA	60-MTDOG	3rd W	7:00pm	Thurman Casey Memorial Library, 2661 Oak Grove Road	415-933-2665
Jun 16	Menlo Park, CA	68-SMOG³	3rd M	7:30pm	Crane Place, 1331 Crane	415-325-2442
Jul 7	Menlo Park, CA	68-SMOG³	1st M	7:30pm	Crane Place, 1331 Crane	415-325-2442
Jul 14	29 Palms, CA	114-HOG	2nd M	6:00pm	CONFIRM	619-367-9783
Jun 18	Arcata, CA	29-HOG	3rd W	7:15pm	Humbold State Univ., Science Bldg., Rm 126	707-445-2074
Jul 3	Santa Rosa, CA	56-No. Bay FOG	1st Th	7:30pm	Valley Oak Park Rec Hall, 2600 Northcoast St.	707-526-0250
Jul 6	Orange, CA	113-NOCOG	1st Su	2:30	Chapman College, Science Bldg., Rm 128	714-952-5627
Jul 1	Santa Maria, CA	42-SMOG	1st Tu	7:00pm	Sears Savings Bank, 401 South Broadway	805-937-1128
Jul 10	San Luis Obispo, CA	47-CCOG	2nd Th	7:00pm	TRW, 1050 Southwood Drive	805-528-2382
Jun 24	Santa Barbara, CA	69-OSBUG	last Tu	7:30pm	SB Planning Rm, 105 E. Anapamu St	805-687-8541
Jul 8	Pasadena, CA	84-OKOK	2nd Tu	6:30pm	Caltech, Winnette Lounge	818-794-3243
Jul 11	Chatsworth, CA	86-ONUG	2nd F	7:00pm	Wizard of OsZ 20630 Lassen Street	818-709-6202
Jun 24	San Fernando, CA	106-TUG-NET	4th Tu	7:00pm	Church of Christ, 1226 Glenoaks Blvd.(MS-DOS SIG)	818-994-6567
Jun 26	Sherman Oaks, CA	106-TUG-NET	4th Th	7:00pm	Central Savings, 4464 Van Nuys Blvd.(OSBORNE SIG)	818-994-6567
Jul 3	North Hollywood, CA	106-TUG-NET	1st Th	7:00pm	Valley Plaza Park Community Center, 12240 Archwood	818-994-6567
Jul 10	San Fernando, CA	106-TUG-NET	2nd Th	7:00pm	Church of Christ, 1226 Glenoaks Blvd.(KAYPRO SIG)	818-994-6567
Jul 10	Davis, CA	6-MUGSY	2nd Th	7:00pm	CONFIRM	707-557-5162
Jul 2	Sacramento, CA	61-SOG	1st W	7:30pm	SMUD Utility Bldg, 1708 59th St	916-444-7415
Jul 3	Denver, CO	4-DOG	1st Th	7:00pm	Clements Comm. Center 2nd Floor 1580 Yarrow	303-690-6301
Jul 9	Boulder, CO	65-BUG	2nd W	7:00pm	Colorado Univ. Business School, Rm 101	303-494-8741
Jul 2	Thornton, CO	85-MIST	1st W	7:00pm	12599 North Colorado Blvd	303-451-0456
Jun 18	Ft. Collins, CO	115-FTCOG	3rd W	7:30pm	C.S.U.Ind. Sciences Computer Lab, 200 W. Laurel, Rm 200	303-226-4156
Jun 18	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647

Continued next page

Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Jun 25	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Jul 2	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Jul 9	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Jul 16	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Jun 26	Danbury, CT	40-DOG	4th W	7:00pm	Qualcorp, Shelter Rock Road	203-775-1102
Jul 9	Danbury, CT	40-DOG	2nd W	7:00pm	Danbury Hospital Library, 2nd Floor, 26 Hospital Avenue	203-775-1102
Jun 19	Orlando, FL	16-GOCUG	3rd Th	7:00pm	Photosound of Orlando, 1812 N. Mills Ave	305-295-5689
Jul 3	Orlando, FL	16-GOCUG	1st Th	7:00pm	Photosound of Orlando, 1812 N. Mills Ave	305-295-5689
Jun 19	Maitland, FL	20-CFLOG	3rd Th	7:30pm	Lake Faith Villas Club Room, Maitland Blvd	305-282-4316
Jul 3	Maitland, FL	20-CFLOG	1st Th	7:30pm	Lake Faith Villas Club Room, Maitland Blvd	305-282-4316
Jul 13	Miami, FL	26-GCOUG	2nd Su	1:30pm	F.I.U Tamiami Campus, Building DM, Room 100	305-233-1779
Jul 10	Ft. Lauderdale, FL	91-FLOG	2nd Th	7:00pm	Harris Computer Sys, 2101 W. Cypress Creek	305-748-7237
Jun 24	Clearwater, FL	46-TBOG	4th Tu	7:30pm	St. Petersburg Times Building	813-584-4185
Jul 8	Tampa, FL	46-TBOG	2nd Tu	7:30pm	Jefferson High School	813-584-4185
Jul 8	Tallahassee, FL	77-TCPMUG	2nd Tu	7:30pm	Episcopal Church of the Advent, 815 Piedmont Drive	904-878-4592
Jul 9	Jacksonville, FL	98-JOUG	2nd W	7:00pm	JEA Bldg, 233 W. Duval Street	904-633-4920
Jul 7	Athens, GA	81-CP/M Athens	1st M	7:00pm	Athens Microcomputer Center, W. Broad Street	404-353-2127
Jul 14	Atlanta, GA	93-TOGA	2nd M	7:00pm	Emory University, Chemistry Bldg. Ampitheater, Decatur Road	404-636-1480
Call	Hilo, HI	124-HIFOG	????		Shayne Enterprises, 180 Kinoole Street	808-935-8678
Jun 23	Davenport, IA	102-QCOG	4th M	7:00pm	CONFIRM	319-386-3484
Jul 9	Davenport, IA	102-QCOG	2nd W	7:00pm	CONFIRM	319-386-3484
Jun 10	Ames, IA	12-Midwest FOG	2nd Tu	7:00pm	(even months) Ames Public Library	515-270-3573
Jul 8	Des Moines, IA	12-Midwest FOG	2nd Tu	7:00pm	(odd months) Yonker's Computer Depot, 100 Merle Hay Plaza	515-270-3573
Jul 10	Sioux City, IA	38-SOG	2nd Th	7:30pm	Western Iowa Tech., Room 508	712-252-2182
Jun 22	River Grove, IL	80-CFOG	4th Su	1:00pm	College Center Bldg, Triton College, 2000 Fifth Ave	312-654-0986
Jul 12	River Grove, IL	80-CFOG	2nd Sa	1:00pm	College Center Bldg, Triton College, 2000 Fifth Ave	312-654-0986
Jul 3	W. Lafayette, IN	34-HOG	1st Th	7:00pm	CONFIRM	317-474-0253
Jul 7	Bloomington, IN	87-IOU	1st M	7:30pm	Indiana Univ, Cyclotron Facility, 2401 M. B. Sampson Lane	812-334-3234
Jun 24	Wichita, KS	21-OPEK	4th Tu	7:30pm	St. Paul's Methodist Church, 1356 Broadway	316-832-0447
Jul 1	Hutchinson, KS	137-HUTCH	1st Tu	7:30	Hutchinson Public Library	316-663-7678
Jul 12	Louisville, KY	64-PCCL	2nd Sa	1:00pm	Univ. of Louisvile, Burhans Hall Rm 202, Shelbyville Road	502-451-0508
Jun 21	Lexington, KY	32-KOG	3rd Sa	12:00n	213 Funkhouser Building, University of Kentucky	606-269-1684
Jul 9	Baton Rouge, LA	103-FLOG	2nd M	7:00pm	Johnson Equipment Co., 4264 Perkins Road Co.	504-923-0888
Jun 24	Bedford, MA	122-BOG	last Tu	7:30pm	Mitre Corp., Route 62	617-484-1863
Jul 11	Lexington, MA	122-BOG	2nd F	7:30pm	Honeywell Electro Optical Div, Route 2A	617-484-1863
Call	Silver Spring, MD	96-ERC-OUG	????		CONFIRM	301-622-4400 x 5331
Jun 18	Columbia, MD	101-OSBUG	3rd W	7:30pm	Florence Bain Senior Center	301-997-3246
Jun 16	Portland, ME	136-SMOG	3rd M	7:00pm	Portland Jetport Conference Room	207-772-1616
Jun 16	Dearborn, MI	14-DeFOG	3rd M	7:30pm	Ford Tech Center Cafeteria, 1700 Rotunda Dr	313-626-6641
Jun 19	Ann Arbor, MI	37-TOGA²	3rd Th	7:00pm	Neuro Science Bldg. Univ. of MI, 1103 East Huron St	313-665-5753
Jul 8	Duluth, MN	118-DSO	2nd Tu	7:00pm	1440 90th Avenue West	218-626-3344
Jul 10	St. Paul, MN	111-TCOG	2nd Th	7:00pm	Univ. of MN,St. Paul Campus Rm B-45 Classrm Off Bldg	612-698-0225
Jun 24	St. Louis, MO	55-SLOG	4th Tu	7:00pm	Thornhill Library, 12863 Willowyck	314-991-4399
Jun 24	Kansas City, MO	97-MIZOG	Last Tu	7:00pm	TWA Bldg, 13th & Baltimore	913-491-0690
Jul 1	Jackson, MS	58-MCPM	1st Tu	7:00pm	R & D Center, Ridgewood Road	601-856-2509
Jul 14	Charlotte, NC	71-LOGIC	2nd M	7:30pm	Home Federal Savings and Loan, Carmel Road	704-377-1154
Jul 14	High Point, NC	107-TROGIC	2nd M	7:30pm	(Odd Months) High Point College, Science Building, Basement	919-766-5530
Jun 12	High Point, NC	107-TROGIC	2nd Th	7:30pm	(Even Months) High Point College, Science Building, Basement	919-766-5530
Jun 16	Raleigh, NC	8-ROCC	3rd M	7:30pm	CONFIRM — Dreyfus Aud., Research Triangle Inst.	919-782-9576
Call	Fargo, ND	117-O/KUG	3rd Th	7:00pm	NDSU, Civil Engineering, Room 216	701-280-1700
Jul 8	Lincoln, NE	39-Lincoln LOG	2nd Tu	7:30pm	5530 O Street	402-761-3393
Jun 18	Linden, NJ	138-JOG	3rd W	7:30pm	Public School #3, Greer Avenue	201-272-2073

Continued next page

Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Jun 26	Albuquerque, NM	127-AOG	last Th	7:00pm	CONFIRM	505-268-3606
Jul 8	Albuquerque, NM	127-AOG	2nd Tu	7:00pm	CONFIRM	505-268-3606
Jun 18	Las Vegas, NV	25-VOG	3rd W	7:00pm	CONFIRM	702-452-2544
Jul 8	New York, NY	135-NYOUG	2nd Tu	7:00pm	73 Franklin Street	212-594-5976
Jul 6	Liverpool, NY	82-SOUP	1st Su	2:00pm	8371 Red Wing Drive	315-622-9209
Jul 9	W. Hempstead, NY	88-LION	2nd W	7:30pm	Adelphi Univ Cont Ed Ctr, Room 110, Eagle Ave	516-481-0129
Jul 8	Rochester, NY	132-FROG	2nd Tu	7:30pm	Monroe County Cooperative Ext. Center, 249 Highland Avenue	716-671-5838
Jul 18	Rye, NY	104-WOG	3rd W	7:15pm	Westchester Federal Savings Bank, 67 Purchase Street	914-725-1098
Jul 7	Oberlin, OH	9-^Ob^Os	1st M	7:30pm	Oberlin College, Rice Faculty Lounge, W. College Street	216-775-8706
Jul 8	Uniontown, OH	44-AKCAN	2nd Tu	6:30pm	13100 Cleveland Avenue NW	216-837-8926
Jul 9	Cleveland, OH	75-COG	2nd W	7:00pm	United Way, 3100 Euclid Avenue	216-888-2078
Jun 17	Cincinnati, OH	27-COG	3rd Tu	7:00pm	Central Trust Center 6th floor, 5th & Main Streets	513-232-4076
Jun 22	Cincinnati, OH	27-COG	4th Sa	2:00pm	2063 Beechmont	513-232-4076
Jul 13	Cincinnati, OH	27-COG	2nd Sa	2:00pm	2063 Beechmont	513-232-4076
Jul 1	Dayton, OH	79-DOUG	1st Tu	7:30pm	St. Paul's Episcopal Church, 33 Dixon Drive	513-434-8207
Jul 9	Oklahoma City, OK	67-OKLOG	2nd W	7:30pm	Southwestern Bell, 111 Dean A McGee, Blue & Gold Rm	405-360-2141
Jun 26	Tulsa, OK	51-OUT	4th Th	8:00pm	Sheridan Library, 62 North Sheridan Road	918-587-3918
Call	Medford, OR	54-RVOG	????		CONFIRM	503-773-1222
Jun 25	Portland, OR	57-PMS	4th W	7:30pm	Bonneville Power Admin. Aud., 1002 NE Holladay St.	503-228-6345
Jul 6	Eugene, OR	128-LOCUG	1st Su	7:00pm	Farwest Federal Bldg., 96 E. Broadway	503-747-8242
Jul 12	Philadelphia, PA	121-PhROG	2nd Sa	9:30am	Merck, Sharp & Dome, Sumneytown Pike	215-648-5862
Jun 22	Pittsburgh, PA	50-TROG	4th Su	2:30pm	Mellon Science Building, Duquesne Univ.	412-765-1766
Call	Lancaster, PA	74-LOG	????	7:30pm	CONFIRM	717-285-4940
Jun 19	Lemoyne, PA	92-MIDPOG	3rd Th	7:30pm	One Stop Computer, 65 N. 5th St	717-243-7858
Jun 24	Greenville, SC	41-POGO	4th Tu	6:30pm	C. Douglas Wilson, 201 E. North Street	803-233-3434
Jun 18	Knoxville,TN	13-SMOG	3rd W	7:30pm	(even months) 11505 Kingston Pike	615-483-6857
Jul 16	Oak Ridge, TN	13-SMOG	3rd W	7:30pm	(odd months) ECS 136 Fairbanks	615-483-6857
Jun 24	Nashville, TN	119-MidTOG	4th Th	7:00pm	Cumberland Museum, 800 ridley blvd.	615-244-5343
Jun 24	Memphis, TN	15-MOG	4th Tu	6:30pm	Poplar/White Station Library	901-522-1234
Jun 19	College Station, TX	43-AGGNOG	3rd Th	5:30pm	A & A Building, Texas A & M Univ. Room 503	409-845-7770
Jun 18	Austin, TX	7-AEIOU	3rd W	6:30pm	Old Quarry Library off Far West Blvd. 7051 Village Center	512-836-3010
Jun 20	Houston, TX	76-OUCH	3rd F	7:30pm	Univ. Houston, 101 Farish Hall, KIVA Rm. (Use lot 1341 off Cullen)	713-931-1096
Jul 12	Houston, TX	108-CLOG	2nd Sa	9:00am	Gilruth Rec. Center, Johnson Space Center	713-332-0859
Jun 22	Amarillo, TX	28-POG	4th Su	2:30pm	Downtown Branch Amarillo Public Library	806-355-7509
Jul 138	Amarillo, TX	28-POG	2nd Su	2:30pm	Downtown Branch Amarillo Public Library	806-355-7509
Jul 14	Lubbock, TX	134-LOG	2nd M	7:30pm	Texas Tech Univ. Law Bldg., 19th & Hartford Room 202	806-742-3920
Jun 18	Provo, UT	30-KAOS	3rd W	7:00pm	Wiltec Research Co. 488 South 500 West	801-225-8293
Jun 19	Salt Lake City, UT	105-SMOG	3rd Th	6:00pm	Sofshop, 2166 Highland Drive	801-268-2831
Jun 19	Richmond, VA	52-CVOG	3rd Th	7:00pm	Red Cross Bldg, 4th and Main	804-282-9545
Jun 21	Norfolk, VA	78-TOG	3rd Sa	9:00am	ECPI, 3661 East Virginia Beach Blvd.	804-497-5556
Jun 19	St. Croix, VI	70-StCOUG	3rd Th	6:30pm	St. Croix Country Day School Library	809-773-7551
Jul 7	Tacoma, WA	72-TOG	1st M	7:00pm	Parkland Library (Basement Mtg Rm) 404 Garfield So.	206-752-5582
Jun 18	Federal Way, WA	99-SKOG	3rd W	7:30pm	Highline Comm. Coll, Gold Rm — Bldg 4	206-643-3521
Jun 16	East Wenatchee, WA	10-WOG	3rd M	7:00pm	211 Ridgemont Drive	509-884-3279
Jul 10	Richland, WA	19-TROG	2nd Th	7:00pm	Richland Public Library, Swift & Northgate	509-967-2430
Jul 9	Spokane, WA	123-SMUG	2nd W	7:00pm	Komputer Korner, N. 2001 Monroe	509-482-7989
Jun 16	Milwaukee, WI	22-MilwOG	3rd M	7:00pm	Math Bldg. Rm 495, Univ. of W. M.	414-255-0440
Jul 1	Madison, WI	129-MOO	1st Tu	7:00pm	Univ of WI., 1210 West Dayton Street, Rm B-214	414-887-2036
Jun 18	St. Albans, WV	59-Valley FOG	3rd W	6:30pm	Public Library, 6th Ave. and 4th Street	304-727-8716
Jun 25	Melbourne, Aust	131-VOUG	4th W	6:00pm	(even months) RMIT, Swanson St., Floor 9, Bldg. 12, Rm 908	03-459-8934
Jul 27	Ashburton, Aust	131-VOUG	4th Su	2:00am	(odd months) Ashburton Public Library, 152 High Street	03-459-8934
Jul 14	Edmonton, Alta	45-KOG	2nd M	7:30pm	Alberta Vocational College, 10215 - 108 Street	403-464-5088

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Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Jul 14	Calgary, Alta	94-COUG	2nd M	7:30pm	616 Macleod Trail S, Seminar room 3,	403-239-5685
Jul 9	Vancouver, B.C.	17-VPCC	2nd W	7:30pm	Hastings Community Center, 3096 East Hastings	604-298-6990
Jun 17	Victoria, B.C.	48-VICOG	3rd Tu	7:30pm	Canadian Forces Base Esquimalt	604-383-1512
Jun 30	Toronto, Ont	120-OUCT	last M	7:00pm	Parkdale Public Library, 1303 Queen St. W.	416-533-1531
Jul 8	London, Ont	95-LOG	2nd Tu	7:30pm	Univ. of W. Ont., Elborn College, Room 2130	519-438-7224 x267
Jul 3	Montreal, P.Q.	73-Microcozm	1st Th	6:30pm	Hillside Armoury, 3 Hillside Lane	514-932-4164
Call	Charlottenlund, Denmark	126-FORMICRO	????	5:00pm	CONFIRM	45-1-631760
Jul 14	Paris, France	110-OUF	2nd M	6:30pm	Centre Andre Malraux, 78 Bd Raspail	1-43-44-82-65
Jul 1	Tel Aviv, Israel	33-IOUG	1st Tu	6:30pm	Productivity Institute, 30 Sderot Yehudit	03-237496
Jul 8	Auckland, New Zealand	53-NZOG	2nd Tu	8:00pm	Auckland University, Human Sciences Building, Rm 336	275-4310
Jul 2	Wellington, New Zealand	109-CROG	1st W	7:30pm	Cafeteria of Trade Span (N Z), 300 Tranaki St.	0064-4-791-172
Jun 17	Edenvale, So Africa	90-JOG	3rd Tu	6:30pm	Civic Centre	011-51-6304
Jul 11	Hattersheim, W. Ger.	24-AGOG	2nd F	7:00pm	Hattersheim Posthof	061-52-4210
Jun 18	Kaiserslautern, W. Ger.	62-FROG	3rd W	7:00pm	Ramstein Air Base, Ramstein Rec. Center	49-6371-13117
Call	Kronberg, W. Ger.	36-CCD	????		CONFIRM	07304-3274

JUNE

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

16th Annual Institute in Computer Science

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For information covering the courses, instructors, housing, fees and other information, call or write Institute in Computer Science, University of California Extension, Santa Cruz, CA 95064, (408) 429-4534.

* * * * * * *

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2	(604) 298-4299	Vancouver, BC	10Mb	300/1200	24 hrs/seven days	
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4	(415) 591-6259	Belmont, CA	92Mb	3/12/24	24 hrs/seven days	Technical Notes
5	(415) 424-1482	Palo Alto, CA	10Mb	300/1200	24 hrs/seven days	
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14	(217) 344-4032	Urbana, IL	10Mb	300/1200	24 hrs/seven days	
15	(212) 489-7370	New York, NY	360K	300/1200	24 hrs/seven days	
16	(818) 882-6045	Van Nuys, CA	10Mb	300/1200	24 hrs/seven days	
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36	(605) 348-5940	Rapid City, SD	5Mb	300/1200	24hrs/seven days	
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49	(201) 848-8217	Wyckoff, NJ	23Mb	3/12/24	24hrs/seven days	
50	(306) 949-1564	Regina, Sask.	47Mb	300/1200	24hrs/seven days	

Tongue in Cheek "Languages"

Some other languages we are sure you didn't know existed!

GIRTH (by Harry M. Hawkins)

(Giant Interactive and Redundant Technical Helper.) A language devoted to weight reduction for rotund programmers. Features very complex commands that keep the programmer at the keyboard for long periods of time thus preventing caloric intake and subsequent reduction in girth (also hence the name).

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Want Library Copies?

Please refer to the **FOG MEMBER MERCHANDISE** in this issue or to the ***FOG Membership Information*** brochure sent to all members for information on obtaining copies of the disk library if you are unable to attend meetings of a local group. If you need a file in a hurry and have a modem, check the **FOG FONES** in this issue for the number of the **FOG** RBBS-RCP/M systems.

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of this program (as it appears on the screen). There is an identical format for the Female part.

On the right is a large table which did not appear in the patient's printout. This is a table of predicted hearing loss as a result of age alone. The program "looks up" the appropriate values for each patient's age, and prints these in column E ("Predicted LOSS"). The SC function which does this is called LOOKUP (more on this later).

Now these "Looked up" values are used in formulae in columns H and I, to indicate whether the observed hearing "loss" is significant, or merely what you would expect (or even better than you would expect). What happens is that if the "loss" is not significant, a zero is displayed (i.e., zero = normal). Visually, this makes it easy to tell at a glance where the abnormal readings are. This is done by another standard SC function (an IF expression).

And that is all! A minor detail is that when the user enters the age group, he only needs enter the FIRST figure of a five-year group, and the last figure automatically is displayed to its right.

How Was It Built?

There are two ways to examine an SC program to see how it ticks. One is to LOAD it, then move the cursor to the particular "cell" you are interested in. A display line near the bottom of the screen displays the "contents" of the cell, while the main display of the SC grid above shows the effect of these "contents". This only allows a cell-by-cell readout.

Alternatively, as I have done here, you can do a printout in two different forms: one for "Display" and one for "Contents". The former is what was used to print Tables One and Three. The latter produced Table Four. The format of this Contents printout is not the same as for the Display, and so a guided tour is in order:

The Contents Report (Table Four)

This is usually printed out rather like an MBASIC listing. As with MBASIC, you can ask it to print the contents between two specified points (here I requested A11:I26, which defines a rectangle from A to I across, and from 11 to 26 down). For convenience, I have put in blank lines so that blocks of related cells are prominent. I have also printed it in two columns.

The printout omits blank cells. It works across a whole row before skipping down to the next.

So if you examine column A (from 19 to 26), looking at the top cell of each of the last six groups, you find that their contents are just numbers (the frequencies tested, 250-8000). This is handy as a "title" for each of these six groups of cells, because they each constitute the cells dealing with the frequency listed at the left hand of their row on the Display. In other words, reading DOWN each group in the Contents, is the same as reading ACROSS a row of the display.

Now you are oriented, look at the contents of E19. This is listed as:

```
E19 R       P=LOOKUP(C11,L18:L30)
```

On the left of the = sign are signs indicating the status of the cell. **R** means text is Right-justified; **P** means the cell contents are Protected from erasure.

The essential details are to the right of the = sign. These are the cell contents, in the form of a LOOKUP expression. This allows a table of paired data to be searched for a particular value. It follows the form:

LOOKUP(X,Y)

where **X** is a value (which may, as here, be a constant located in another cell; or may even be a variable defined by a formula in another cell); **Y** is the range to be searched, in this case a column. This column serves as an index to the column on its right, and so must contain all possible values of **X**.

The column on its right constitutes the data being sought. For example, note that in Table Three Mr. Citizen is aged 55-59. Hence X=55. Now lookup the row of values to the right of this 55 figure for each frequency. They appear in Row 23 of the SC grid, as 6 7 7 13 etc.

The limitations of the system necessitated that each frequency have its own pair of columns (the index column for age, and the data column). But it was easy to use SC's REPLICATE command to copy the index column eight times. Only the data columns had to be very carefully individually keyed in. They were copied from a table in a scientific journal.

Now, a similar formula had to be entered into each of the eight "PREDICTED LOSS in dB" cells of column E. But these were done by a variant of the REPLICATE command (following the prompts, you key in a , (comma), for OPTIONS, then an **N**, for NO ADJUST). What you get is an exact copy of E19 in each cell below it. You now can edit each of these, to change two letters in each formula, to specify the appropriate column for that particular LOOKUP.

Finally, a similar process was used to produce the other two columns on the right of the players's printout, of Table One. Since these are identical types of formulae, I only need to describe one:

The "Difference" Formulae — An IF Expression

You recall, this was intended to indicate whether the hearing was normal or not. An IF expression follows the form:

IF(exp1,exp2,exp3)

This means that if Expression1 is TRUE, then Expression2 must be used, and if FALSE then Expression3 must be used. This follows a form similar to the MBASIC "IF...THEN...ELSE" expression, which I find a useful aide-memoire for the format here.

For instance, in cell H19:

IF((E19-C19)>-15,0,E19-C19)

So here, my formula means that if the person's hearing for that frequency is BETTER than predicted (a plus value) or at least NO WORSE THAN -15 (dB below predicted), then a zero is printed (Exp2); If it IS WORSE, then the difference from predicted is printed (as has happened in cell I23).

There: although it took a lot of words, I think you will see that the tasks involved were essentially simple and boring. A

repetitive lookup involving large tables. It deserved to be "suped up".

I am sure that you will be able to think of a similar fairly simple use of SC as a practice piece. What about a financial one, such as a Statement of Position for your proposed mortgagor? I'll bet THAT strikes a familiar note to many of you! That is a program I find myself periodically reusing, and it takes a lot of the irritation out of that chore, to have a spreadsheet that automatically recalculates when I find one more error or omission from my balance sheet. Then, when I think I've got it right, I SAVE the current version. And, when I find the Nth omission next week, I can resume where I left off.

Table 1: Printout for each Player

PREDICTION TABLE FOR HEARING LOSS WITH AGE

NAME:CITIZEN,John * MALE
NUMBER:
AGE GROUP: 55 to 59 yrs * DATE:15/11/84

FREQ-ENCY (Hz)	ACTUAL LOSS (dB)	Predicted LOSS (dB)	DIFFERENCE,Actual from Predicted	LEFT	RIGHT
	LEFT	RIGHT			
250	N/A	N/A	6	N/A	N/A
500	N/A	N/A	7	N/A	N/A
1000	N/A	N/A	7	N/A	N/A
2000	N/A	N/A	13	N/A	N/A
3000	25	45	20	0	-25
4000	25	25	26	0	0
6000	20	25	30	0	0
8000	25	20	31	0	0

* not accurate above 85 yrs.

[Copyright. Permission is given for the copying and use of this SC application and documentation provided no charge is made. Comments to the author, on improvements, are welcomed.]

The pairs of columns above, for your left and right ear tell you two things: on the left are the actual reading for your hearing loss at each frequency, uncorrected.

On the right, is an interpretation of whether your loss is greater than predicted for your age and sex.

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A zero means you are either better than predicted, or that the loss is within 15 dB of predicted, and so not significant. A loss greater than 20 dB will need to be checked by a further more detailed audiogram.

Table 2: Contents of SC File "M"

The actual SC file contents appear below, after the double line.

This command file is used to print part of SC program "HEARING.CAL"; (on FOG/CPM.039).

It is executed by loading & running "HEARING.CAL"; When ready to print, you then type the following:

```
/X      [you are prompted: (EXECUTE) Enter File Name]
M.↵     [your filename MUST end in "."]
        [your file now gets executed as below]
```

```
==============

/ODA7:J41
SS
P
```

Table 3: (part) Display of SC File HEARING.CAL

```
  ¦ A ¦¦ B¦¦ C ¦¦D¦¦  E ¦¦ F ¦¦G¦¦ H ¦¦   I   ¦¦    J   ¦ ¦ L ¦¦ M¦¦ N¦¦ O¦¦ P¦¦ Q¦¦ R¦¦ S¦¦ T¦¦ U¦¦ V¦¦ W¦¦ X¦¦ Y¦¦ Z¦¦AA¦
 1¦PREDICTION TABLE FOR HEARING LOSS WITH AGE    Enter AGE GROUP as either 25,30,35 etc. DO NOT
 2¦FOR FEMALES, jump to cell AC7                 use 20 or less (not available in tables)...
 3¦             by pressing:  =AC7(RETURN)       instead, insert 25 for anyone younger, since
 4¦                  ...more about age groups-) the difference is trivial.
 5¦PRINTOUT: /O D A7:J41(CR) SS(CR) P            (FULL DOCUMENTATION IN FILE: HEARING.DOC)
 6¦-----------------------------------------------------------------------------------------------------------------------
 7¦PREDICTION TABLE FOR HEARING LOSS WITH AGE             (based on the method described      adapted for SUPERCALC
 8¦                                                        by SPOOR, A; in                   by Dr Peter Dodwell
 9¦     NAME:CITIZEN,John        * MALE                   PRESBYCUSIS VALUES IN RELATION      Dept of Health,
10¦   NUMBER:                                            TO NOISE INDUCED HEARING LOSS       Box 5013,
11¦AGE GROUP:   55 to 59   yrs  *  DATE:15/11/84        Int. Aud. (1967); 6:48-57           Wellington, New Zealand.
12¦-----------------------------------------------------------------------------------------------------------------------
13¦FREQ-  ¦   ACTUAL Predicted  DIFFERENCE,Actual       ¦ AGE GP PV
14¦ENCY   ¦    LOSS     LOSS     from Predicted         ¦   250       500      1000      2000      3000      4000      6000      8000
15¦ (Hz)      (dB)     (dB)                            ¦
16¦-------------------------------------------------¦ -------------------------------------------------------------------------
17¦       ¦ LEFT RIGHT          LEFT RIGHT
18¦       ¦                                         ¦  25    0   25  0   25  0   25  0   25  1   25  1   25  2   25  1
19¦ 250   ¦ N/A  N/A     6      N/A  N/A             ¦  30    0   30  0   30  0   30  1   30  3   30  4   30  5   30  4
20¦ 500   ¦ N/A  N/A     7      N/A  N/A             ¦  35    1   35  1   35  1   35  3   35  5   35  7   35  9   35  8
21¦ 1000  ¦ N/A  N/A     7      N/A  N/A             ¦  40    2   40  2   40  2   40  5   40  8   40  11  40  14  40  13
22¦ 2000  ¦ N/A  N/A    13      N/A  N/A             ¦  45    3   45  3   45  3   45  7   45  11  45  16  45  19  45  18
23¦ 3000  ¦  25   45    20       0   -25             ¦  50    4   50  5   50  5   50  10  50  15  50  21  50  24  50  24
24¦ 4000  ¦  25   25    26       0    0              ¦  55    6   55  7   55  7   55  13  55  20  55  26  55  30  55  31
25¦ 6000  ¦  20   25    30       0    0              ¦  60    8   60  9   60  9   60  17  60  25  60  31  60  37  60  39
26¦ 8000  ¦  25   20    31       0    0              ¦  65    10  65  12  65  12  65  22  65  31  65  37  65  44  65  48
27¦-------------------------------------------------¦  70    13  70  15  70  15  70  27  70  37  70  44  70  51  70  58
28¦* not accurate above 85 yrs.                     ¦  75    16  75  18  75  19  75  33  75  44  75  51  75  59  75  68
29¦                                                 ¦  80    19  80  22  80  23  80  40  80  52  80  59  80  67  80  80
30¦ The pairs of columns above, for your left and right ear¦  85   N/A 85 N/A 85 N/A 85 N/A 85 N/A 85 N/A 85 N/A 85 N/A
31¦ tell you two things: on the left are the actual reading¦
32¦ for your hearing loss at each frequency, uncorrected.  ¦
33¦ On the right, is an interpretation of whether your loss¦
34¦ is greater than predicted for your age and sex.        ¦
35¦                                                       ¦
36¦ A zero means you are either better than predicted, or  ¦
37¦ that the loss is within 15 dB of predicted, and so     ¦
38¦ not significant. A loss greater than 20 dB will need to¦
39¦ be checked by a further more detailed audiogram.       ¦
40¦                                                       ¦
41¦                                                       ¦
```

Table 4: SuperCalc ver. 1.12
partial contents of file HEARING.CAL

```
PREDICTION TABLE FOR HEARING LOSS WITH AGE

     A11      P= ''AGE GROUP:/p
     C11 RI    = 55
     D11      P= '' to
     E11 L    P= C11+4
     F11      P= ''yrs
     G11       = ''*
     H11      P= ''DATE:
     I11       = ''15/11/84

     A12      P= '_

     A13      P= ''FREQ-
     B13      P= '' ¦
     C13      P= '' ACTUAL
     E13      P= ''Predicted
     G13      P= ''DIFFERENCE,Actual

     A14      P= ''ENCY
     B14      P= '' ¦
     C14      P= ''  LOSS
     E14      P= ''   LOSS
     G14      P= '' from Predicted

     A15      P= '' (Hz)
     C15      P= ''  (dB)
     E15      P= ''   (dB)

     A16      P= '_

     B17       = '' ¦
     C17      P= ''LEFT
     D17      P= ''RIGHT
     H17      P= ''LEFT
     I17      P= ''RIGHT

     B18       = '' ¦

     A19      P= 250
     B19       = '' ¦
     C19      P= NA
     D19      P= NA
     E19 R    P= LOOKUP(C11,L18:L30)
     H19      P= IF((E19-C19)>-15,0,E19-C19)

A20      P= 500
B20       = '' ¦
C20      P= NA
D20      P= NA
E20 R    P= LOOKUP(C11,N18:N30)
H20      P= IF((E20-C20)>-15,0,E20-C20)
I20      P= IF((E20-D20)>-15,0,E20-D20)

A21      P= 1000
B21       = '' ¦
C21      P= NA
D21      P= NA
E21 R    P= LOOKUP(C11,P18:P30)
H21      P= IF((E21-C21)>-15,0,E21-C21)
I21      P= IF((E21-D21)>-15,0,E21-D21)

A22      P= 2000
B22       = '' ¦
C22      P= NA
D22      P= NA
E22 R    P= LOOKUP(C11,R18:R30)
H22      P= IF((E22-C22)>-15,0,E22-C22)
I22      P= IF((E22-D22)>-15,0,E22-D22)

A23      P= 3000
B23       = '' ¦
C23       = 25
D23       = 45
E23 R    P= LOOKUP(C11,T18:T30)
H23      P= IF((E23-C23)>-15,0,E23-C23)
I23      P= IF((E23-D23)>-15,0,E23-D23)

A24      P= 4000
B24       = '' ¦
C24       = 25
D24       = 25
E24      P= LOOKUP(C11,V18:V30)
H24      P= IF((E24-C24)>-15,0,E24-C24)
I24      P= IF((E24-D24)>-15,0,E24-D24)

A25      P= 6000
B25       = '' ¦
C25       = 20
D25       = 25
E25      P= LOOKUP(C11,X18:X30)
H25      P= IF((E25-C25)>-15,0,E25-C25)
I25      P= IF((E25-D25)>-15,0,E25-D25)

A26      P= 8000
B26       = '' ¦
C26       = 25
D26       = 20
E26      P= LOOKUP(C11,Z18:Z30)
H26      P= IF((E26-C26)>-15,0,E26-C26)
I26      P= IF((E26-D26)>-15,0,E26-D26)
```

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MANAGING DATA

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Changing a Field Name in a dBASE File

by Ralph Totman

I recently created a data base containing 100 records, using a digit as the first character of two of the field names. This is, of course, a no-no, but I had forgotten the rules and dBASE didn't warn me until I tried to display and print selected fields only.

Then I received the message, *** SYNTAX ERROR ***. When I checked the rules I realized what I had done, but now how to change the field names? You cannot display the structure on a word processor and change it, and if you modify the structure (having saved a copy of the file) you cannot APPEND FROM ‹other copy› since the field names will not match.

If you are fluent with DDT.COM, you may be able to find the field names in the structure file — but I am not.

The solution is quite straightforward.

Let's call the errant file BADFIELD.DBF.

Type:

USE BADFIELD ↵

COPY TO tempfile SDF ↵ the SDF creates a text file TEMPFILE.TXT. COPY STRU(cture) to tfile. USE tfile. DELE(te) FILE BADFILE. MODI(fy) STRU(cture).

MODI(fy) STRU(cture) ↵ answer **Y** to the question after the warning.

The screen will display the fields in vertical columns, which you can then change by moving around with the arrow keys and typing in the changes desired.

Leave this mode when ready by entering **^W**. This will write the new structure to disk. Follow with:

APPE(nd) FROM tempfile.TXT SDF ↵

don't omit the SDF.

Then to satisfy yourself that all is well, try **DISP(lay) STRU(cture)** ↵ followed by **LIST** ↵. All your records should be back where they belong and the field names should be correct.

Finally type **DELE FILE TEMPFILE.TXT** ↵ to delete the extra copy of your date base file.

Happy dBASEing.

• • • • • • •

Merging Data in an Easy Way

by Arto Kytohonka

The data generator by Louie Crew in the November 1985 ***FOGHORN*** works fine but there is a more flexible way to end the program than to give a certain NUMBER OF COPIES, as Louie proposed.

If you have WordStar version 3.3 and its conditional commands, the task is easy, but even under the good old 2.26 you can do some simple tricks.

First, as a repetition, here is a plain version of a data generator.

```
.CS
.DM     This file is called ADDR.GEN
.DM
.AV ''Company          '',CO
.AV ''Title            '',TTL
.AV ''Name             '',NAME
.AV ''Street           '',STR
.AV ''City             '',CITY
.AV ''ZIP              '',ZIP
.AV ''Phone            '',PH
.DM ***   If OK, press (RETURN). Otherwise   ***
.AV ''enter two periods (..) if there is an error '',ERR
.PL 1
.MT 0
.MB 0
.PO 0
.PF OFF
&ERR/O&''&CO&'',''&TTL&'',''&NAME&'',''&STR&'',''&CITY&'',''&ZIP&'',''&PH&''
```

So far this is very clear, and corresponds to the article by Louie Crew. But now we'll go on, and write to the next line:

```
.AV ''If no more information, enter a period'',POINT
&POINT/O&              (and now write ^PM (control PM))
.FI ADDR.GEN           (and a hard carriage return, i.e. ^M)
```

Having all carefully read the WordStar-manual we know that ^PM is the overprint command, so if you write a period, the last two lines become one plain line beginning with two dots. WordStar reads it just as a comment, and you're addresses (or whatever data) will be read in the disk file, and the session is safely ended.

If you have WS 3.3, you can use the conditional .IF command. The procedure is as follows:

```
.AV ''More information (Y/N)'',NOMORE,1
.IF &NOMORE&=''N'' .OR. &NOMORE&=''n'' GOTO END
.FI OSOITE.GEN
.EF END                (and a hard (RETURN))
```

• • • • • • •

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```
+1Things to Do
  +prepare for board meeting
    -get budget figures ready
    +Profit/Loss figures look good
      -Lead off with this
  +Pick up flowers for Jennifer
    -she likes roses
  +Tell people about thoughtline
    +Richard Elms
      -an attorney would love this
    +Betsy
      -great for her screenplay
  +November Calendar
    -17
    +18
      -dentist appointment @9:30
      +Lunch w/Fred
        -bring hawaii brochures
    -20
```

Thoughtline is more than just a way to create an outline. Working from your outline is simple - just continue typing on a topic and ***Thoughtline*** switches into a word processor - expand ideas to your hearts content. To return to the outline form touch ^UD and your paragraphs tuck back into the topic heading.

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Hands down the most useful, powerful, fun to use and flashy piece of software I've encountered ... I caught on to it within half an hour of busting the wrapper and went straight to heaven - *Paul Estrem*

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...and as for Thoughtline - WOW! I bought KAMAS and waded through Adam Trent's obtuse mental gyrations until I was literally dizzy ...I sent for KAMA's little brother OutThink. Again, another great disappointment ...then comes Thoughtline. Now I can outline my books and articles just as I had hoped to when I bought KAMAS and later OutThink - *Dr. Eric Skousen, Writer*

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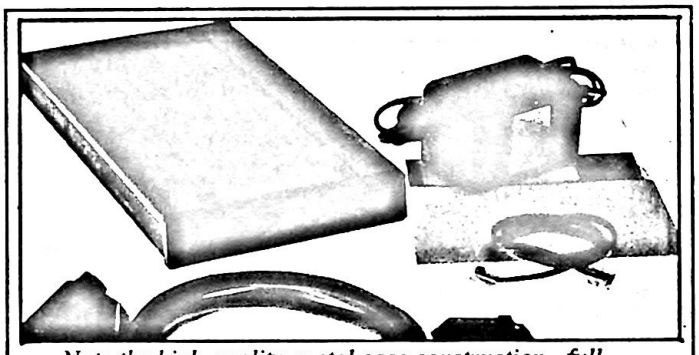

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dBASE BASIC or Behind the Blinking Dot

by a Kaypro User's Group Member

The first question the curious ask about dBASE II is "Why bother?"

And first acquaintances may be put off by the program's silence. Instead of an inviting menus of choices there is only the eternally blinking dot. This article will start you "behind the dBASE dot" to show some of the power of dBASE II and drop some hints that may make it easier to use.

The blinking dot is really a kind of question mark. dBASE is waiting for you to type in a command telling it what to do (the first four letters will do — that's Hint #1).

That means you have immediate access an astounding amount of power — dBASE lets you use the information in your files in ways Perfect Filer never dreamed of — but you do have to know what to ask for.

Fortunately, the commands are words you'd expect — LIST, DELETE, APPEND, LOCATE, FIND, etc. The manual is hardly a great one, but its tutorials are a decent introduction to these basic commands.

The most-asked question is "How can I get the files I already have into dBASE II?"

It's simple.

Take your Christmas card list as an example — each entry has a First Name, Last Name, Street, City, State, and Zip. The entire entry is called a RECORD, and each item is called a FIELD. The first step is to CREATE a dBASE file with specifications something like this — call it XMASLIST.DBF:

Field Name	Field Type	Field Width
FIRSTNAME	- CHARACTERS	10 spaces
LASTNAME	- CHARACTERS	10 spaces
STREET	- CHARACTERS	15 spaces
CITY	- CHARACTERS	10 spaces
STATE	- CHARACTERS	2 spaces
ZIP	- CHARACTERS	5 spaces

To get your list into dBASE II, you need to make an ASCII text file of your data. Let's call it MYFILE.TXT. The "ASCII" simply means "letters & numbers only" — no control codes.

Another way of saying this is to make a list of your data that your word processor can read (in the NON-DOCUMENT MODE for WordStar users).

dBASE II accepts text data in two forms:

1) In the first form, the spacing is critical. To match the dBASE file above, you'd want a document that looked like this:

```
Santa     Claus     Icy Way          ToyTown      NP01225
Sally     Doe       101 2nd Ave.     New York     NY10101

12345678901234567890123456789012345678901234567890123456789
```

(the numbers are for reference only — don't put them in your file.)

Notice that each piece of information occupies exactly the number of spaces specified in the data base and there's a carriage return (↵) at the end of each record. Your present data base can probably create a document like this with its Report or List function.

2) In the second method, spacing is unimportant, although the data items can't be longer than specified in the dBASE file or they'll be chopped off. This time the data would look like this:

```
Santa,Claus,Icy Way,Toytown,NP,01225,
Sally,Doe,101 2nd Ave,New York,NY,10101,
```

Now each piece of information is separated from the next by a comma. And there's another comma as well as a carriage return at the end of each line or record. This form might be easy to produce with a word processor.

To get the data from these forms into the dBASE file, get to the infamous dot prompt. (I'll let you fill in the appropriate A: or B: depending on your system in these examples.)

At the prompt enter **USE XMASLIST** which makes that file active. Then, for form 1, say **APPEND FROM MYFILE.TXT SDF.** SDF means Standard Data Format.

For form 2, say **APPEND FROM MYFILE.TXT DELIMITED** — DELIMITED tells dBASE to look for commas between each field. dBASE II will read your text file and fill the data base with your information.

The next question is "Now What?!"

The real power of dBASE lies in the fact that you can write a sequence of the commands in a file — which makes it a programming language. That's how dBASE II is used for so many business applications, custom-tailored to specific needs. In my own work, a dBASE program of these commands keeps track of business contacts, writes my letters, keeps track of my appointments, and even dials my phone.

• • • • • • •

Tongue in Cheek "Languages"

Some other languages we are sure you didn't know existed!

LINDA (by Harry M. Hawkins)

(LINDA Lovelace.) A close friend of numerous programmers and of "Deep Throat" fame. This language is limited to applications associated with kinky social behavior. Commands are descriptive to the extent that they cannot be published.

• • • • • • •

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TOOLBOX

Little Used ASCII Characters

by Jim Cooke

I don't know how many have investigated ASCII characters beyond those listed in the manual, but here are two short BASIC programs — one to look at 'em; the other to use 'em.

```
10 'CHR - TO LOOK AT ASCII CHARACTERS AT WILL
20 DEFSTR C:CS=CHR$(26):PRINT CS;''255 MAX- - MINUS QUITS''
30 C=CHR$(27):CE=C+CHR$(84):CR=CHR$(13):CU=CHR$(11)
35 XRT=50:WIDTH XRT
40 PRINT ''REMEMBER SOME ARE NOT PRINTABLE'':PRINT  CE;
45 INPUT''CHR$ NUMBER (DECIMAL) '';X
50 IF X<0 THEN END ELSE PRINT
55 PRINT CE;X;''EQUALS '';CHR$(X);CR;CU;CU GOTO 40
```

and for Osborne 1 only:

```
10 'UNDER - ROUTINE TO UNDERLINE TEXT ON SCREEN  (for O-1 only)
20 DEFINT X:DEFSTR C,D:XRT = 50:WIDTH XRT
30 CS = CHR$(26):PRINT CS;TAB(40)''XX QUITS''
40 INPUT''WHAT TO UNDERLINE '';D1
50 IF D1 = ''XX'' THEN END ELSE GOSUB 1000
60 PRINT TAB(10)D2:GOTO 40
1000 D2='' '' ''****** UNDERLINE ******
1010 FOR A=1 TO LEN(D1)
1020 X = ASC(MID$(D1,A,1)):X = X + 128: D2 = D2 + CHR$(X)
1030 NEXT A:RETURN
```

* * * * * * *

A Little BASIC and a Little Fun for Beginning Programmers on the Zorba

by Nancy Ellis

If you have purchased or gained access to a Zorba, have run some of the standard software such as WordStar, and played one of several games (such as Chess), and now you really want to do a little programming yourself, this article is for you.

One excellent way to familiarize yourself with CBASIC is to find a few short programs (say 20 or so lines), enter them using the editor or WordStar, and compile and run them studying both the method for creating programs and also becoming more familiar with the language.

This shouldn't be too hard. A visit to the local bookstore, however, reveals that there are several nice game books for computer buffs who have purchased a Commodore or a Timex, but not a single book called ***BASIC Programs for your Zorba***.

A simple solution? Buy one of those books for a Commodore and modify the programs (where necessary) so that they will run on the Zorba.

The book I happened to choose is ***26 BASIC PROGRAMS FOR YOUR MICRO*** by Derrick Daines. There are dozens of similar books on the market. To choose yours, make sure the first program in the book is not more than half a page and the last program is not more than six pages long (preferably with a fair sprinkling of PRINT statements). The programs should gradually get longer throughout the book, and hopefully go from easy to more complex.

With book in hand, plus your Zorba documentation, you are ready to begin. If you use WordStar, you should always enter programs using the non-document mode.

Next comes the tricky part. Since the programs have been written for a Commodore, most will not run as CBASIC without modification. The following are hints and suggestions based upon my experience of adapting the programs in Daines' book to run on my Zorba.

Some computers, Commodores and TRS-80s among others, are sold with a BASIC interpreter. An interpreter does the same job as a compiler, translating BASIC instructions into machine code, only it does so, one line at a time, as programs are entered. An automatic line numbering feature is usually available with such interpreters.

Line numbers are not required in a CBASIC program unless they are referred to in other lines of a program, such as GOTO 10. I found it easier to just include the line numbers in programs I copied, rather than try to determine which numbers were needed (use XREF that came with CBASIC).

I did find it easier, however, to type the numbers without leading zeroes — 10 for example rather than 0010. But, consistency is probably more important.

I was able to enter and run the first program with only a few changes:

1. The Commodore command for randomize appears as RND(0)*20. Change this to the following format:

```
RND * 20
```

2. CBASIC may interpret R+1 as a single variable name rather than as an addition of 1 to the variable R. Change expressions such as R+1 to R + 1.

If you are not comfortable with CBASIC yet, it may be a good idea to stop and look up any line in a program that you do not understand. As you work from easier to more complicated programs you will improve your understanding of the language.

Compiling and running the program are the easiest steps to perform, but can be time consuming as some errors will be flagged by the compiler and other ("logic") errors will not be noticeable until a program runs incorrectly. Programmers schedule almost as much time for this testing as for writing

⇨

the original program.

To compile a program named SAMPLE.BAS, enter:

CBAS2 SAMPLE

Error messages will be displayed. To run SAMPLE (after all of the compiler detected errors have been corrected):

CRUN2 SAMPLE

The most common errors for a beginner will be syntax errors, i.e., spelling or punctuation errors. If you can't see your mistake, sometimes killing and reentering the line will cure the problem. This is especially true if you have inadvertently used WordStar in "document" mode to make any changes to the program.

The following are additional differences that I found as I worked through the programs:

3. Commodore BASIC uses a comma with INPUT to separate display from the input variable: CBASIC uses a semicolon.
4. If you find END in the middle of a program, replace it with STOP. CBASIC uses END as a compiler directive and STOP as program terminator.
5. Replace PRESS RETURN as an operator-entered indication of continuation with ENTER ANY LETTER. Entering a return into a variable will space fill that variable for some versions of BASIC, but not CBASIC.

(Note: Alternatively, use CBASIC's CONCHAR% statement as follows:

```
PRINT ''Press (return) to continue . . . '';
WAIT% = CONCHAR%
```

WAIT% will have the decimal ASCII value of the key pressed, if a ↵ (return) is pressed it will have a value of 13.

You could also use:

```
WAIT$ = CHR$(CONCHAR%)
```

and WAIT$ will be a character, not a number.)

6. Commodore and TRS-80 machines apparently set the dimension automatically to 10 whenever a subscripted variable is addressed in a program. CBASIC, similar to FORTRAN and most high level languages, requires a DIM statement which specifies the number of array elements for the variable. For example:

```
FOR N = 1 TO 8
  PRINT P$(N)
NEXT N
```

in a CBASIC program would require a dimension statement such as: DIM P$(8). A dimension statement is often placed at the beginning of a program, because it must appear before the first line of code which addresses the dimensioned variable.

7. The easiest way to clear a variable is to use a blank string such as BLANK$. Each time you want to reinitialize a variable simply include: variable$ = BLANK$.
8. CBASIC does not allow an IF statement to appear as other than the first statement in a line of code. This did not create a problem in any of the game programs which I converted. (It could create a problem if the program being converted contained more than one IF in a single line of code, i.e "nested" IF's. For my purpose, it was sufficient merely to break the line into two lines so that the IF became the first statement of the next line. I didn't even need a line number. A word of caution: breaking a programming line after an IF statement will usually change the meaning since statements, which are part of a programming line that begins with an IF, are executed conditionally based upon satisfaction of the conditions of the IF.
9. CBASIC requires THEN as part of the IF statement. Thus, IF C = 10 PRINT "C" is not valid. Replace it with:

```
IF C = 10 THEN PRINT ''C''
```

10. RND as shown in 1. above is sufficient to get a program to work, but the number generated will repeat each time the program is restarted, not truly random as it would be in BASIC. CBASIC requires "seeding" of the generator.
11. Cursor control codes may need to be changed. A section follows explaining cursor control code changes required to convert Commodore programs to run on the Zorba.

In addition to the changes listed above, I did find one or two typing errors in the book itself which had to be corrected in order for the games to function as described. Out of 26 games, I have converted and debugged all but four or five of the longer ones at the end of the book.

Section II — Conversion of Cursor Control Codes

My book contained a chart listing conversion of escape sequences for the Apple, TRS-80 and others, but not for the Zorba. So my first task was to make up my own chart using the Commodore codes and those I found on pages 110-112 of the ***Zorba User's Reference Guide***:

Function	Commodore	Zorba	Program Coding
Clear screen	CHR$(25)	ESC E	PRINT CHR$(27);CHR$(69)
Cursor home	CHR$(16)	ESC H	PRINT CHR$(27);CHR$(72)
Erase to end of line	CHR$(6)	ESC K	PRINT CHR$(27);CHR$(75)
Erase to end of screen	CHR$(22)	ESC J	PRINT CHR$(27);CHR$(74)

If you check Appendix C, *ASCII Character Codes*, you can easily see how the ESC and E for instance have equivalent decimal values of 27 and 69. There are other ways to code printing of escape sequences, but the above is probably the most straightforward if you are just beginning.

The Commodore has a few escape sequences for which I found no equivalent codes for the Heath terminal, such as CHR$(11) for cursor up one line or CHR$(10) for cursor down one line.

If you really want the cursor to go up one line you will probably have to spend some time working with direct cursor positioning, explained briefly later in this article.

Having gained some insight into the cursor commands, you may find as I did, that you are not entirely satisfied with the programs as presented to you. For instance, if the game includes a board or map you may find that you would prefer to have the map always appears on the top of the screen. This being the case you can easily insert the line:

```
PRINT CHR$(27);CHR$(69)
```

immediately in front of the section of code which draws the map.

One of the most powerful terminal commands is that for direct cursor positioning, a discussion of which is found on pages 110 and 111 of the ***Zorba User's Reference Guide***. Once you have your map always printing at the top of the screen, you may decide that you would like the corresponding questions to always appear in the same position at the bottom of the screen. If you want a question to begin, for instance, on the 10th line at the second position, immediately prior to the printing of that question, insert the following code:

```
PRINT CHR$(27);CHR$(89);CHR$(31 + 10);CHR$(31 + 2)
```

Section III — Final Comments

Converting programs from one version of BASIC to another such as CBASIC takes some work. As you try to compile various programs the compiler error messages will alert you to check your CBASIC manual to find the acceptable syntax. Other differences will be found only by running the programs, seeing what doesn't work and trying to find something that will. If the programs are fairly complex you may decide that it just isn't worth the effort.

Converting programs written for CP/M which do not have a setup procedure for the Heath terminal will only involve changes in terminal escape codes. If escape codes can be converted directly, i.e., by simply replacing one number for another, the task will be fairly easy. However, if the program makes use of alternate video attributes, (inverse video, half intensity etc.), getting the program to function properly may be a complicated task.

Reference: 26 BASIC PROGRAMS FOR YOUR MICRO by Derrick Daines. Published by Howard W. Sams & Co, Inc. 4300 West 62nd Street, Indianapolis, IN 46268. ISBN: 0-672-22047-4. Price $8.95

*[Reproduced from the **Oracle of ZEUS**, the newsletter of the independent Zorba Equipment Users' Society.]*

* * * * * * *

Talk to Your Printer in Assembly Language

by Page S. Jackson

A topic frequently appearing in the ***FOGHORN*** and ***Portable Companion*** is the printer. Hooking up the printer, getting it to run, and making it pay attention to printer control codes present endless problems. There have been a number of articles, for instance, on patching WordStar. There have been fewer on what to do when room for patches has run out.

My own printer manual (STAR SG-10) points out the problems encountered because the printer uses ESC for its printer control codes while WordStar uses the ESC key for other things.

The printer manual suggests using BASIC to address the printer. I find it much simpler to accomplish the same thing with brief assembly language programs. Since these are .COM files, they can be run from the A› prompt of CP/M or by using WordStar's "R" (run a program) command. There is no need to load BASIC. Moreover, each command program occupies only 1K of space on the disk.

If you have placed your system tracks on all of your disks as recommended, these printer control code programs may be run from the system prompt, A›, on any disk to which you have copied these programs.

The microprocessor used in CP/M computers has a built-in instruction set that includes an instruction to send hex numbers to the printer. It looks like this in assembly language:

```
MVI C,5
MVI E,(hex number to be sent)
CALL 5
```

Since any printer code can be expressed in hex numbers, it is a simple matter to create programs that will send the desired instruction codes to the printer.

To create the program we will use the mini-assembler of DDT. As an example, we will write a program that will select the NLQ (Near Letter Quality) character set. The escape code for my printer for that command is <**ESC**>"**B**"**4**. Converting to hex, this becomes **1B 42 04**.

Note: The printer wants hex 4, and not 34 which would be the hex ASCII equivalent for 4. The codes for my printer are not always consistent in this respect. However, my manual, and, I trust, yours, puts ASCII letters and numbers in quotes, and also gives the decimal and hex versions of all of its printer codes.

The following steps will write, assemble and send the program to the specified disk:

Insert your CP/M disk in Drive A, hit ↵ (carriage return) and, at the A› prompt, type **DDT**. At the - prompt type **a100**. The addresses, as shown in the first column below, will automatically be supplied by DDT. Type in the following after the addresses as shown below:

```
0100 MVI C,5↵
0102 MVI E,1B↵
0104 CALL 5↵
0107 MVI C,5↵
0109 MVI E,42↵
010B CALL 5↵
010E MVI C,5↵
0110 MVI E,4↵
0112 CALL 5↵
0115 RET↵
0116 .↵
-
```

At the hyphen prompt, type **gO** (zero, not o). At the system prompt A>, type **SAVE 1 NLQ.COM** (or file name of your choice). The ".COM" is mandatory. The program may then be copied to your WordStar disk.

To send the command to the printer from WordStar, turn on your printer and then hit **R** (run a program). When prompted for a command, type **NLQ** and hit ↵.

Thereafter, anything sent to the printer will be printed in Near Letter Quality until you turn off your printer or are ready to change the instruction.

To send the command from CP/M's A> prompt, first turn on the printer, then hit **^P** (control P) and ↵. If you forget to use the **^P** printer toggle, nothing will be sent to the printer. At the next A> prompt, type **NLQ** and ↵. Again, any text sent to the printer will appear in Near Letter Quality.

When the printer code calls for a decimal number such as (n)/72 of an inch or (n) lines, then the value of "n" that you select must be converted to hex. For example, my printer code for line spacing in increments of n/72 inch is **<ESC>"A"(n)**. To get spacing of four lines to the inch, n is 18, i.e., 18/72 = 4. Decimal 18 is 12 hex. Thus, the printer code in hex is **1b 41 12**.

More than one printer command may be strung together in one program, at least for those that I have tried. If you want both condensed print and eight lines to the inch, the codes are **<ESC>"B"3** and **<ESC>"0"** or, in hex, **1b 42 3 1b 30**. Note that in this case, 30, which is the ASCII hex code for zero, is required as indicated by the quotation marks around the 0.

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A Problem with TURBO Pascal

by Philip R. Yant

I want to point out a potentially disastrous problem that is facing the world of public domain software. Paradoxically, it is that delightful product, TURBO Pascal.

Right off, let me point out that I think this is a wonderful package. I greatly enjoy using it and I recommend it to anyone. Pascal is not much more difficult to learn than BASIC, and the TURBO system helps learning by pinpointing errors. The speed gained by using a compiler, over the interpreted BASIC, will benefit most applications.

However, TURBO has a feature that makes its compiled programs unusable by some other CP/M machines, or even your own machine in some circumstances. The source of this problem, and the way to work around it, were pointed out in ***Dr. Dobb's Journal*** in July and November, 1985.

The problem is that the compiler allocates memory for its data stack at the location just under the operating system at the time of compilation. If the program is run from a COM file, the same location will be used for this stack.

The problem is that the operating system may now occupy that space. If that is the case, the results, as the texts say, are unpredictable. The nicest result is an error message saying Not Enough Memory.

I have also had the machine hang up and I have had it fill the screen with random characters: both of these required a reset. I have had all these problems with programs in the CP/M library.

To see the source of the problem, choose **O** for options while using TURBO, then **C** for creation of a COM file. The compiler will display the starting and ending addresses that will be used.

The troublesome one is the end address. On my double density Osborne 1, the end address is D040h, unless I have Drive C installed, and then the end is CB40h. My Televideo TPC1 with CP/M 2.2 has an end address of D940h; with CP/M 3.0, the end address is E940. This is with TURBO 2.0. With 1.0, the addresses are higher.

It should be clear why a program compiles on my TPC1 will not work on my O-1, and why, amazingly, a program compiled on my O-1 without Drive C will not work on the same machine when Drive C is installed. And why none of the programs in the FOG library that were written in TURBO have worked for me.

I have two suggestions for making public domain TURBO programs more widely usable. First, include the source program. When this is available, anyone with the TURBO compiler can compile the program, be it in a LBR file with source, DOC and COM files.

Second is the suggestion published in ***Dr. Dobb's Journal*** in a letter from Ed Winograd. That is, before compilation, set the end address to something small like A100h. This can be done by choosing **O** for options, **C** for COM file, and **E** for end address, and then entering A100.

This will allow the program to be used on most CP/M machines that run TURBO. The disadvantage is that this limits program size, and that a user cannot tell under what conditions the program was compiled. Therefore, even when this is done, I still favor distribution of the source.

TURBO has clearly allowed a lot of people who wouldn't otherwise to become involved in software development. A little forethought will allow their production to be more useful to more people.

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Opening Empty Files as Disk Labels (Easily)

by R. B. Nelson

Here is a simple MBASIC program that will make those files beginning with "-" which are so handy as disk labels:

```
10 PRINT ''LABELER.BAS
20 PRINT ''Program to enter disc label in disc directory
30 PRINT ''Input label including - prefix.''
35 PRINT ''Truncate on right.''
40 LINE INPUT ''                    ''; DISKLABEL$
50 OPEN ''R'', 1, DISKLABEL$
60 CLOSE
70 SYSTEM
```

At the prompt type:

```
B> A:MBASIC A:LABELER↵
```

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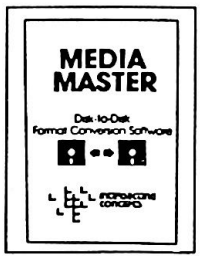

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FOG MEMBER LIBRARY NEWS

Library Notes

by Jack Brown

Recently I have had a number of people asking for software for the Vixen. FOG/CPM.035 contains the ONLY Vixen-specific programs we have received to date. The Vixen is such a generic CP/M machine that it runs the majority of CP/M programs without modifications, and many of the Osborne 1 graphics work on it as well. If you have any special programs for the Vixen, I urge you to submit them to the library.

The Electric Easel program is an example of the excellent shareware programs coming out for CP/M machines that rival the commercial programs. If you always wanted a full-feature graphics package for your Osborne or Kaypro, take a look at this.

-FOG/CPM.035: Vixen specific programs and Misc. games.

```
//CPM035 .DOC:
/MAY/86  .   :
FIX      .COM: For VIXEN only. Reformats DS disks to single
               sided.
KEYPAD   .DOC: For Vixen only. Gives you a numeric keypad with
KEYPADV3 .ASM: a toggle of your DEL key. Z80 source code.
KEYPADV3 .COM: Ready to use version of KEYPADV3.
KEYPADV3 .DOC: New features in Version 3 of KEYPAD.
MAZE     .DOC: Maze game for 80 column O-1 or Vixen.
MAZE     .DTA: Data file for sample maze.
MAZE     .PAS: TURBO Pascal source for MAKEMAZE & MAZEPLAY.
MAZEMAKE .COM: Draws maze and stores it in a file.
MAZEPLAY .COM: Move your man through a maze. Very simplistic.
MMVIX115 .COM: Media Master for version 1.01 and higher ROM
               revision.
MMVIXEN  .DOC: Details of Media Master update FOR VIXEN ONLY.
TRIVIA   .COM: ''Trivial Pursuit'' type game. Use supplied
TRIVIA   .DOC: data files or create your own.
TRIVIA1  .DAT: WARNING.. this is Case Sensitive.. use all CAPS
TRIVIA2  .DAT: in your answers!
TRIVIA3  .DAT:
TRIVIA4  .DAT:
TRIVIA5  .DAT:
TRIVIA6  .DAT: All .DAT files are sample data files.
TRIVIA7  .DAT:
TRIVIA8  .DAT:
TRIVIA9  .DAT:
VIXEN    .DEL: How to change the Vixen DEL key to normal
               backspace.
```

-FOG/CPM.042: Electric Easel drawing program for

```
//CPM042 .DOC: KAYPRO 2x/4-84/10.
/MAY/86  .   :
BABY10   .CHR:
BOLD10   .CHR:
COMPUTER .PIC: This program allows you to compose and edit
EASEL    .PIC: graphics on your screen and save the images to a
               disk file.
FANCY10  .CHR:
KAY12    .CHR: Draw circles, plot lines between 2 points, etc.
KAY16    .CHR:
KAYEASEL .DOC:
KEASEL   .COM: Works with Epson, Gemini, or NEC 8023A print-
               ers.
KEASEL   .HLP:
LOGO     .PIC:
PRINTER  .DAT:
PSCHL10  .CHR:
```

-FOG/CPM.043: Electric Easel drawing program for the

```
//CPM043 .DOC: Osborne Executive.
/MAY/86  .   :
APRINT   .OVR:
BBY8X10  .CHR:
BLD8X10  .CHR: All files are for the Electric Easel program.
E1       .OVR:
E10      .OVR: Documentation is on FOG/CPM.046.
E11      .OVR:
E12      .OVR:
E13      .OVR:
E14      .OVR:
E15      .OVR:
E16      .OVR:
E17      .OVR:
E18      .OVR:
E19      .OVR:
E2       .OVR:
E20      .OVR:
E21      .OVR:
E22      .OVR:
E23      .OVR:
E24      .OVR:
E25      .OVR:
E26      .OVR:
E27      .OVR:
E28      .OVR:
E29      .OVR:
E3       .OVR:
E4       .OVR:
E5       .OVR:
E6       .OVR:
E7       .OVR:
E8       .OVR:
E9       .OVR:
EASEL    .COM:
EASEL    .HLP:
LOGO     .   :
```

```
OS6X10   .CHR:
OS6X12   .CHR:
OS6X16   .CHR:
OS8X10   .CHR:
OS8X16   .CHR:
TERMDEF  .DEF:
TEST     .   :
TEST     .MAC:
```

-FOG/CPM.044: Electric Easel drawing program and 0-1 arrow key utility. Osborne 1 and Vixen Version.

```
//CPM044 .DOC:
/MAY/86  .   :
APRINT   .OVR:
BBY8X10  .CHR:
BLD8X10  .CHR:
E1       .OVR:
E10      .OVR:
E11      .OVR:
E12      .OVR:
E13      .OVR:
E14      .OVR:  All files are part of Electric Easel for 0-1.
E15      .OVR:
E16      .OVR:  Documentation is on FOG/CPM.046.
E17      .OVR:
E18      .OVR:
E2       .OVR:
E20      .OVR:
E21      .OVR:
E22      .OVR:
E23      .OVR:
E24      .OVR:
E25      .OVR:
E26      .OVR:
E27      .OVR:
E28      .OVR:
E29      .OVR:
E3       .OVR:
E4       .OVR:
E5       .OVR:
E6       .OVR:
E7       .OVR:
E8       .OVR:
E9       .OVR:
EASEL    .COM:
EASEL    .HLP:
FLIPKEYS .AQM:  Assembler source for FLIPKEYS.
FLIPKEYS .COM:  Allows you to switch from WS to CPM arrow keys
                and back.
FLIPKEYS .WS :  Documentation for FLIPKEYS.
LOGO     .   :
OS6X10   .CHR:
OS6X12   .CHR:
OS6X16   .CHR:
OS8X10   .CHR:
OS8X16   .CHR:
PVID     .OVR:
TERMDEF  .DEF:
TEST     .MAC:
```

-FOG/CPM.045: EASEL documentation and CP/M utilities.

```
//CPM045 .DOC:
/MAY/86  .   :
APRINT   .DOC:  Advanced printer driver info. for EASEL.
EASEL    .DOC:  Electric Easel documentation for FOG/CPM.042,
                .043, .044.
EX15     .AQM:  Source code for use with MAC.
EX15     .COM:  Memory-based submit utility (update from EX14).
EX15     .DOC:  Documentation and examples for EX15.
EX15     .LIB:  Macro library used for assembly of source file.
EX15     .SUB:  Submit file to assemble and create EX15.COM.
EX15     .TST:  Sample file to test special EX15 functions.
EX15     .UPD:  Update info. now works under LBRDSK and
                SmartKey II.
QK21     .COM:  Keyboard redefinition program adds programma-
QK21     .DOC:  ble function keys to any CP/M computer.
RELS     .UTL:  Used to assemble EX15.
```

-FOG/CPM.046: dBASE II utility files.

```
//CPM046 .DOC:
/MAY/86  .   :
DBINDENT .BAS:  Original MBASIC source for DBINDENT.
DBINDENT .COM:  Compiled version that runs alone.
DBINDENT .DOC:  'Pretty up' your dBASE source file indentation.
DBINDENT .HLP:  On-line help for DBINDENT.
DBSOURCE .BAS:
DBSOURCE .COM:  Read and unencode .CMD files encoded with EN-
DBSOURCE .DOC:  CODE, DB-SQZ5 or Ashton-Tate's DBCODE
                (RUNTIME).
DBSOURCE .HLP:  On-line help for DBSOURCE.
DBSRC2   .BAS:
DBSRC2   .COM:  Slight variation of DBSOURCE.
ENCODE   .BAS:  Update from FOG/CPM.006 with new .DOC file and
                source.
ENCODE   .COM:  Shrinks and tokenizes dBASE ver. 2.4 or higher
ENCODE   .DOC:  and allows files to run under RUNTIME if nec-
                essary.
ENCODE   .HLP:  On-line help for ENCODE.
```

● ● ● ● ● ● ● ●

Tongue In Cheek "Languages"

Some other languages we are sure you didn't know existed!

APE (by Harry M. Hawkins)

(A Programming Experience.) Similar to APL except that it is not interactive. Use of random input by either monkeys, apes (also hence the name), or humans of similar mental capacity eventually creates high-level literary compositions similar to those written by Shakespeare. Generally useful for writers and animal lovers.

● ● ● ● ● ● ● ●

Using Library — .LBR — Files

by Jerry Boyce

Sometime ago I questioned Jack Brown from FOG Tech Support about using the .LBR files to group all related files on the new Library Disks for convenience in downloading from the RCP/M's and to help the local Disk Librarians make sure that all related files were copied from the library disks at local meetings.

It is hard to try to explain how to use a program over the phone that you are not familiar with to someone that did not copy the .DOC file. I was surprised when he told me that the .LBR type file was not being used because too many members did not know how to use it and that the FOG office was getting several calls each week on the use of the file.

He suggested that I write up the use of the Library file system and how it is used, so here it is in short form to get you interested. Both LSWEEP.COM and LU.COM with its associated programs have very good and extensive documentation so I will just give the highlights of their use.

The .LBR file is a large saver of disk space and very useful to keep a group of related files together. The space saved will depend on how the system blocks out the disks and the Osborne 1 is a good example of this.

The SD Osborne 1 used 2K blocks while the DD upgrade uses only 1K blocks. On the SD unit any file from a few bytes up to 2048 bytes will use 2K of space while on the DD unit a file has to be over 1024 bytes before it will show up as a 2K file.

An example for the SD unit would be 12 files each 950 bytes long would use 24K of disk space and 12 of your 32 directory spaces. The same files in .LBR form use 12K of disk space and only 1 of the directory spaces. With small files, you can easily run out of directory space without filling the disk space.

Using this example, there would be no saving in disk space for the DD Osborne 1. If the 12 files are increased to 1100 bytes each they would use the same 24K of disk space but .LBR form reduces the disk space to 15K.

LSWEEP.COM and LSWEEP.DOC are on FOG/UTL.041 and are widely available on the RCP/M's around the country. You might want to get this program first as it is best to use reading or extracting a single program from a .LBR file. LSWEEP.COM is a 16K file and may be called from the A> prompt with or without the filename as:

A> **LSWEEP**↵ (the following screen will appear requesting the library filename)

```
                    LSWEEP

                    Ver:1.03   84-22-01
                    Joe Vogler

                    Derived from: LDIR & LTYPE
Correct syntax is:

      LSWEEP (name1) [(name2)]...

where (name1), (name2), etc. are unambiguous library names.
Filetype .LBR is assumed if not specified.

Ambiguous names are allowed.
-----)Avoid using wild cards in the extension.
-----)If using wild cards, always use .LBR
```

In either case, user/drive prefixes are OK, e.g.:

A> **LSWEEP 4/D:*.LBR'** is ok.

or you may call the .LBR file directly as:

A> **LSWEEP CARDFILE** (Note: The .LBR extent not needed.)

This will appear.

```
                    LSWEEP

                    Ver:1.03   84-22-01
                    Joe Vogler

                    Derived from: LDIR & LTYPE

COMMANDS:

  ? - Displays this menu.
  E - Extracts (and unsqueezes) a member.
  V - Views a (viewable) file. (squeezed or unsqueezed)
  X - Exits this program.
      Any other input skips to the next member

Library: B:CARDFILE.LBR has 20 entries, 2 free:

B:CARDFILE.LBR *  1. EXECCOM .CMD   3k )
B:CARDFILE.LBR *  2. LABELALL.CMD   1k )
      \ \\\\\\\\\\\\\\\\\\\\
       \ \\\\\\\\\\\\\\\\\\\\
B:CARDFILE.LBR * 17. SUPPORT .CMD   4k )
```

(Note 1: One entry is not listed which is the directory of the Library.)

(Note 2: When you hit "E" to extract a file you are asked for the disk to copy the file to. A ↵ copies to the default disk or if "A" is the default drive and you want the file to be on "B", type B:. The colon must be used.)

LSWEEP is used only for reading a text file that is in the .LBR file or for extracting single files. Squeezed files are always unsqueezed when they are extracted. This is one of the major advantages for using LSWEEP when extracting files. LSWEEP cannot be used to place files into a library or to originate a .LBR file.

LU.COM is the main file that was written and placed in the public domain by Gary P. Novosielski in 1982. There have been several upgrades since that time with the latest listed as LU310.COM. I have not used this version to date and do not know what the new features are that have been added. I currently use version 2.11.

The following files are all part of the .LBR series:

LDIR	.COM	7K)	This permits you to read the directory of a .LBR file and is entered at a .LBR file and is entered at the A> prompt as **LDIR (filename)**↵. The LBR extent is not needed.
LDIR	.DOC	3K)	

LRUN20	.COM	2K ›	This will run a .COM file that is contained in a .LBR file without extracting the file from the library. If the files listed here were in a .LBR file named LU.LBR and I wanted to run LU211 I would type **LRUN20 -LU LU211** at the A› prompt. The - must be used with no space before LU.
LU211	.COM	18K ›	Main library program
LU211	.DOC	29K ›	Documentation
LUDEF1	.DOC	7K ›	Doc. update
LU-NOTE	.TXT	1K ›	Doc. update
LTYPE	.COM	9K ›	Used to read an unsqueezed text file contained in a .LBR file. At the A› prompt type: **LTYPE LU LU211.DOC**↵. The - is not needed here.

The program LU211 or shortened to just LU is called directly from the A› prompt as: **LU**↵. The screen below will appear.

```
Library Utility      Ver:2.11   83-03-04

Copyright (c) 1983 by Gary P. Novosielski
```

-? 0/A:› (This is the LU.COM prompt. The user area and drive are listed. In this case it is USER 0 on DRIVE A.)

At this point various operators are used for each action that is desired. The operator is always preceded by the "-" sign with no space between them as "-O" to open a file. The operators are:

-O filename↵	The .LBR extent is not used. If a .LBR with that name is on the disk, it will be opened and if not a new file with that name will be opened and you will be asked for the number of entries.
-A (xxxx.yyy)	The add operator to add files to the .LBR file that is open. Wild cards may be used such as *.*, B:*.*, *.DOC, XXXXXX.*, etc. The wild card operator will not add a .LBR file to the library.
-E (xxxx.yyy)	The extract operator to extract the files from the open library. Wild card operator as above may be used.
-L↵	Lists the directory of the open .LBR file.
-C↵	This closes the library after use. It is very important that the library be closed after use or it could be lost.

These are the most used operators and the others are very well explained in the documentation if they are needed.

The following is an example of how to form a .LBR file. Figure I below is a directory of the related .CMD files on one of my dBASE disks. You will note that there are 17 files totaling 74K which will be placed in a library named CARDFILE.

Figure I

```
    Drive B0:  files: 17  space used: 74k  (242k free)
B0: CONTLIST.CMD  6k : LABELALL.CMD  2k : NEWENTRY.CMD  4k
B0: CONTMAIL.CMD  4k : LISTALL .CMD  2k : NONSUPPT.CMD 10k
B0: EDITREPS.CMD 12k : LISTMENU.CMD  4k : SUPPORT .CMD  4k
B0: EXECCOM .CMD  4k : MAILMENU.CMD  2k : TWOACROS.CMD  4k
B0: HCPYALL .CMD  4k : MECREP-2.CMD  2k : VOLTEER .CMD  4k
B0: HCPYLINE.CMD  2k : MECREPUB.CMD  4k :
```

LU.COM is called from the A› prompt to start the library.

A› **LU**↵

```
Library Utility      Ver:2.11   83-03-04

Copyright (c) 1983 by Gary P. Novosielski
```

-? 0/A:› (This is the LU.COM prompt)

You type in the commands printed in bold.

-? 0/B:›**-o cardfile** (CARDFILE is the .LBR file to be formed)

New library: CARDFILE.LBR. Allow how many entries? **19**

(Add 2 extra for the future)

Created CARDFILE.LBR with 20 entries, 19 free.

(Stated by LU.COM)

-0 0/B:›**-a *.cmd** (Add all .CMD files on the disk)

Adding: 0/B:EXECCOM.CMD

(each file is named as it is added to the library)

-A 0/B:›**-c** (Closes the library)

Old library: CARDFILE.LBR closed.

-? 0/B:›**^C** (To exit the program)

FIGURE II below is a partial listing of the disk directory after the .LBR file was made to show the much smaller disk space used by the .LBR file. The 74K required for the .CMD files has been reduced to 56K.

Figure II

```
    Drive B0:  files: 32  space used: 586k (186k free)
B0: CARDFILE.LBR 56k : EDFILE  .COM 12k : LISTALL .CMD  2k
B0: CONTLIST.CMD  6k : EDITREPS.CMD 12k : LISTMENU.CMD  4k
B0: CONTMAIL.CMD  4k : EXECCOM .CMD  4k : MAILMENU.CMD  2k
```

The placement of all related files such as these will help in disk copying at local meetings because you will know that you have copied all the files needed.

The big saving is in transfer of the files from an RCP/M. For 17 small files such as these, you would spend about as much time typing in the send and receive commands as would be required to transmit the code and even more time would be required if they are part of a disk .LBR file as they would be on the FOG RCP/M's.

LU.COM and its associated files and LSWEEP.COM should be on everyone's utility disk.

Jerry is the Disk Librarian for LOGIC (Local Osborne Group Including CP/M). For information on this group, check the listing in the **CALENDAR** *section of this issue.*

• • • • • • •

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SYSTEMS

Find your computer, printer, or operating system here. This is system-specific.

ZORBA & RITEMAN PRINTER

The Riteman for the Job

by Larry Willard

Using WordStar on the Zorba with a Riteman printer offers exciting and powerful options for fast document entry and display, and many different printing characteristics. Not all hardware and software sold today "fits" together so well. I hope to help you get started and make WordStar able to use some of Riteman's special features.

OK, you've got a Zorba, WordStar and a Riteman printer. Here's what you should do:

1. In your ***Zorba User's Reference Guide*** at least up to page 28 (and listen to the instructional cassette if you got one). Format a whole box of new floppies. You must make copies of your original disks and do an SGEN. Next, read page 89 and run PATCH. You should then learn and try these CP/M commands: DIR, STAT, PIP, and TYPE. To make your Riteman work, you'll have to run SETUP and make the PORT B protocol Centronics Parallel. PATCH, SGEN and SETUP will need to write to your new disk, so don't cover the write protect notch too soon. The WordStar program WS.COM has already been installed for your Zorba. Type in **WS** to start. Hit **NEW LINE** for the HELP menu. Try it for a few days or weeks and then proceed to Step 2.

2. Set up your function keys to make WordStar easier to use. You can save your definition file on the system track, (making it permanent), if you do the following:

A› **SETUP** ⮐
R — for READ a function KEY FILE
X — EXIT, (and save parameters to Disk A)

3. By now you know that there is no ITALICS command and that some of the other WordStar features don't do anything when you print a document on a Riteman. I'm talking about the subscript, superscript, alternate pitch/standard pitch, other ribbon color, and the user patchers on the "PRINT MENU". Let me explain that WordStar "magic" provides the bold, double, underscore, and strikeout effects by assuming your Teletype-like printer could overprint a line by doing a carriage return without a line feed. Nobody told WordStar that you have a Riteman!

Subscripts, Superscripts, Italics,
Two Alternate Pitches and a Surprise Bonus

We have to reinstall WordStar to tell it about the Riteman. Copy your original WordStar COM file (WS.COM) using the PIP command (**PIP WSR.COM=WS.COM**). Your original (i.e., distribution copy) WS.COM should be somewhere safe, retrieve that disk and copy the WordStar INSTALL program (called INSTALL.COM or WINSTALL.COM) onto your WordStar disk, ensuring that there is at least 32K free space on the disk afterwards.

You should now have a disk in the Drive A (which is not write-protected) and which contains WS.COM, WSR.COM, and INSTALL.COM and 32K free space. CP/M should show the A› prompt.

Type: **WINSTALL** ⮐
DO YOU WANT A NORMAL FIRST-TIME INSTALLATION Y/N ?
Type: **N** to display other options
INSTALLATION OPTIONS MENU
Type in: **B** for re-install to file of your choice
FILENAME of WordStar to be file to be installed
Type: **WS.COM** to use previously installed file
FILENAME for saving re-installed WordStar to
Type: **WSR.COM** for our new file name
TERMINAL MENU #1
Type: **U** for no change
Heath or Zenith H89 Terminal and OK (Y/N):
Type: **Y**
PRINTER MENU
Type: **U** for no change
Teletype-like printer and OK (Y/N):
Type: **Y**
COMMUNICATIONS PROTOCOL MENU
Type: **U** for no change
You will see No communications protocol and OK (Y/N):
Type: **Y**
DRIVER MENU
Type: **U** for no change
CP/M List Output driver (LST:) and OK (Y/N):
Type: **Y**
MODIFICATIONS TO WordStar COMPLETE? ...etc. OK (Y/N):
Type: **N** for NO!!
YOU MAY NOW MODIFY ANY LOCATION ...etc.

We will use only labels followed by a : and sometimes **+1**, **+2**, **+3**, or **+4** (a ⮐ can be used to get the "next" location, i.e., +1). You will be asked LOCATION TO BE CHANGED and after your entry it will display the ADDRESS: OLD VALUE: and ask for NEW VALUE:. Enter these locations and new values with ⮐ after each:

Location	Old Value	New Value	(codes for Riteman only)
PSHALF:	00H	04	Allow Half LF
PSHALF:+1	00H	0D	For Sub and Super
PSHALF:+2	00H	1B	
PSHALF:+3	00H	4A	
PSHALF:+4	00H	18	
PALT:	00H	01	Compressed On
PALT:+1	00H	0F	
PSTD:	00H	01	Compressed Off
PSTD:+1	00H	12	
USR1:	00H	02	Italics On

Location	Old Value	New Value	(codes for Riteman only)
USR1:+1	00H	1B	
USR1:+2	00H	34	
USR2:	00H	02	Italics Off
USR2:+1	00H	1B	
USR2:+2	00H	35	
USR3:	00H	03	Surprise Bonus On
USR3:+1	00H	1B	
USR3:+2	00H	53	
USR3:+3	00H	00	(No Change)
USR4:	00H	04	Surprise Bonus Off
USR4:+1	00H	1B	
USR4:+2	00H	54	
USR4:+3	00H	1B	
USR4:+4	00H	48	
RIBBON:	00H	03	Expanded On
RIBBON:+1	00H	1B	
RIBBON:+2	00H	57	
RIBBON:+3	00H	01	
RIBOFF:	00H	03	Expanded Off
RIBOFF:+1	00H	1B	
RIBOFF:+2	00H	57	
RIBOFF:+3	00H	00	(No Change)

Three more optional changes follow which some people may not want!

ITHELP:	03H	02 or 01 or 00	Set Help Level Automatically
HZONE:	04H	08	Set Hyphen-help to Break After 8 Chars
HITE:	18H	19	Set 25 Line Screen

This change to HITE works great for WordStar and doesn't affect CP/M. However, there's one inconvenience. If you eXit to CP/M you'll end up on line 25. When you enter a command, e.g., A>**DIR**, you may think the Zorba has gone crazy. Not so! Hit **HOME**, or **SHIFT HOME** to fix — line feeds don't work on the 25th line.

We are finished. Type: **0**↵ to end. INSTALL will then review your terminal, printer, protocol and output driver selections and ask for a final OK (Y/N): Type: **Y**

What Have We Done and How Do You Use It?

We have created WSR.COM which can be used instead of WS.COM, (type **WSR** at the A> prompt).

I assumed you have a Riteman printer AND switches SW1 and SW2 in the lower center rear panel are both OFF (UP), giving 1/6 inch paper feed per line and N/288 inch feed.

I set up WordStar to print subscripts and superscripts using it's half-line feed overprint feature. This works best with double spacing because single spacing looks crowded. Also if you single space and use a superscript on a line following a subscript in the same column, the superscript will have no place to go, so will appear as a normal character.

Second, I have setup WordStar's alternate pitch to use Riteman's compressed print. Standard pitch turns off compressed print. This works great when used with the caution noted below. Also, compressed print seems to print in only one direction.

Third, I have setup WordStar's other ribbon color to use Riteman's double-width expanded print. The next occurrence of other ribbon color will turn expanded print off. I have chosen a Riteman expanded print command which will not be turned off automatically before beginning the next line. This works well, however a word of warning:

Using expanded or compressed print is invisible to WordStar, (we're using the "other ribbon color")! Justification may not be maintained properly and should be handled manually if desired, (adjust margins and reform). When a large number of characters are printed using double width expanded printing you can easily exceed the 80 column Riteman line, (printing will continue in column 1, next line). Similarly, compressed print will not fill an entire line unless you intervene. Remember that spaces are characters too and will be expanded or compressed. Use of WordStar's **.PO 0**, (dot command), may be necessary to obtain the desired result when printing more than one line using expanded print.

I have setup WordStar's USER's PATCHES #1 and #2 to begin and end italic printing respectively. This works perfectly!

Finally, I have setup WordStar's USER's PATCHES #3 and #4 as your surprise bonus. Using #3 will begin Riteman's superscript which I have found to be both interesting and useful!

I will refer to this as R-SUPER to distinguish it from WordStar's superscript. Turn off R-SUPER with #4. R-SUPER prints a superscript character within the bounds of it's current line, (i.e, it does not rise above the characters on the same line).

It does however, appear much differently than a normal character since it is reduced in total height. This works perfectly although you may want this in combination with compressed print to achieve better proportioned characters. R-SUPER leaves the width unchanged while decreasing the height. It is automatically printed with double-strike by Riteman, (double strike elsewhere on the same line looks out of focus).

Here's a summary of our enhanced print capabilities. Keep in mind that they can be used in various combinations and also with other WordStar print features, (double strike-compressed-italics, expanded-compressed, compressed-subscript-R-SUPER, etc.). Pick those which you find most useful and program them into your function keys, (use ^ **keypad** [^ means control] if you want).

While you're in SETUP, you may want to change the Cold Boot Command to WSR. Then SGEN these functions onto your everyday WordStar disk with a copy of WSR.COM etc., leaving all of this work duplicated on a backup disk somewhere!

Table 1. Riteman Printer Commands

On	Off	WordStar Name and AKA	Riteman Result
^PA	^PN	Alternate Pitch/Std	Compressed Print
^PY	^PY	Other Ribbon Color	Double-wide Expanded Print
^PQ	^PW	USER1/USER2	Italics
^PE	^PR	USER3/USER4	Riteman-Superscript.

On	Off	WordStar Name and AKA	Riteman Result
		aka R-SUPER	Shortened and Even Width Character Top
^PT	^PT	Superscript	Above Line, Full Size
^PV	^PV	Subscript	Below Line, Full Size
^PV^PE	^PV^PR	Subscript-USER3/4	Below Line, Shortened
		aka SUPER-SUB	
^PV^PE^PA	^PV^PR^PN	SUB-USER3-ALT	Pitch Same with Compress
		aka COMPRESSED-SUPER-SUB	
^PT^PE	^PT^PR	Superscript-USER3/4	Way Above Line, Short
		aka SUPER-SUPER	
^PT^PE^PA	^PT^PR^PN	SUPER-USER3-ALT Pitch	" " + Compress
		aka COMPRESSED-SUPER-SUPER	
^PA^PY	^PY^PN	ALT Pitch-other Ribbon	Expanded-compressed

*[Reproduced from the **Oracle of ZEUS**, the newsletter of the Independent Zorba Equipment Users' Society.]*

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OKIDATA 92

WordStar and the Okidata 92

by Robert Wright & Jeffrey Timm

The Okidata ML92 is a very popular dot matrix printer. In its "correspondence quality" mode the print quality is high, only slightly inferior to a daisy wheel printer, and good enough for almost every word processing requirement.

Its greatest advantage over a daisy wheel printer is that the Oki 92 accepts downloaded characters. This means that, with a little patience, you can create a variety of alternative character fonts.

If you are using the Oki 92 with WordStar and you have not yet added any print patches, you are driving your printer at only half throttle. With the appropriate patches, WordStar can specify six different print sizes, do true superscript and subscript, and print in correspondence quality.

All this is accomplished through control characters placed in your WordStar text file during word processing.

First of all, run INSTALL.COM the WordStar installation program. This is the correct configuration for the Oki 92:

Your Terminal choice
Teletype-like printer
No communications protocol
CP/M List Output driver (LST:)

In WS 2.26 when INSTALL asks `Are the Modifications to WordStar now complete?`, you must type **N**. INSTALL then asks, `Location to be changed.`

With WS 3.0, type **A** '+' at the main menu to enter the system patcher.

Here's where the fun begins. What you must do is change the appropriate hexadecimal codes in WS.COM so they conform to the requirements of the Oki 92. This is discussed in the **Custom Printer Installation** section of the WordStar documentation.

With this information, along with the **Control Code Quick Reference** which is included in the Oki 92 ***User's Manual*** you can make optimal use of the Okidata 92 printer.

WS Command	INSTALL Label	Description	New Value
^PX	POSWTH:	Overstrike	FF
^PB	BLDSTR:	Bold Face	03
^PD	DBLSTR:	Double strike	02
	PSCRLF:	CR and LF	02, 0D, 0A
	PBACKS:	Back space	00
	PSHALF:	Half LF	00
^PT	ROLUP:	Start/Stop superscript	02, 1B, 4A
^PV	ROLDOW:	Start/Stop subscript	02, 1B, 4C
^PN	PALT:	12 Char per inch	01, 1E
^PA	PSTD:	10 Char per inch (std)	01, 1E
^PY	RIBBON:	Correspondence quality	02, 1B, 31
^PY	RIBOFF:	Data Processing quality	02, 1B, 30
^PE	USR1:	17 Char per inch	01, 1C
^PW	USR2:	5 Char per inch	01, 1F
^PQ	USR3:	12 Char per inch	01, 1D
^PR	USR4:	8.5 Char per inch	02, 1C, 1F

For special character sets, you can use the downloadable character feature of the Okidata printer, and substitute for two of the above commands:

^PR	USR4:	Special Alphabet on	1B, 32
^PN	PALT:	Normal Char set on	1B, 31

A complete set of directions is available from:

Okidata Corporation
532 Fellowship Road
Mount Laurel, NJ 08054
Tel. (609) 235-2600
(Ask for Okidata user tips)

The WordStar Print Menu was modified to accommodate these changes. This is done with a disk utility program such as DDT or POWER (a fantastic program).

Load WSMSGS.OVR into memory at 4000H and substitute the new messages for old, byte by byte. The Print Menu messages begin at about 5580 Hex. The messages and locations are:

Beginning Hex Location	Old Message	New Message
562F	A Alternate pitch	Y Letter Quality
567F	N Standard pitch	Q 12 Char per inch
56CF	C Printing pause	E 17 Char per inch
571F	Y Other ribbon color	W 5 Char per inch
57BF	Q(1) W(2) E(3) R(4)	R Special Alphabets

Similarly the WordStar sign-on can be modified by overwriting the terminal, printer and protocol messages with a customized identifier for Zorba (and user or department name etc). It is done the same way by substituting the messages in WS.COM at hex locations about 4090 (Do not erase the ! mark-

ers which separate the lines).

By the way, look for a hidden message in WSOVLY1.OVR around 40C0.

Notes

^PW used in combination with the three character sizes (10, 12, and 17 characters per inch) doubles the width of each (printing at 5, 6, and 7.5 characters per inch respectively).

The Word Plus spelling checker (TW.COM) can be run from within WordStar. If it is renamed **SPELSTAR.COM** it can then be chained (executed with control returned to WordStar afterwards) from the **S** command from WordStar.

Character Generator Program

CHAR.BAS is a CBASIC program designed to download an alternate character set to the Okidata 92. The program was written by Robert Wright, who has placed it in the public domain (not at FOG yet). The codes for Greek characters are contained in a separate file called GREEK. The Oki 92 User's Manual discusses this procedure for deriving the codes required to generate a new character.

First of all your copy of WordStar must be patched so that the control character **^PR** changes the printer from data mode to graphics mode, and control character **^PY** changes the printer back to "correspondence-quality" data mode.

Next, CHAR.BAS must be transformed into CHAR.INT. This is accomplished by entering **CBAS2 CHAR.BAS** after the prompt. Once CHAR.INT is created you are ready to run the Character generator program.

From WordStar's Edit No File Menu select **R** for "run a program" and run CHAR.INT by entering **CRUN2 CHAR** after the prompt. Answer the questions asked, and when this is complete a series of eight line feeds will be sent to the printer, indicating that the alternate character set has been downloaded.

Now go back to WordStar and create your document. Any time you wish to use a character in the alternate character set, type **^PR** at the beginning of the entry, and **^PY** at the end.

Remember, you will not see the alternate character on the screen, but it will appear when the document is printed. Finally, whenever the printer is turned off the alternate character set is lost, and the program CHAR.INT must be run again.

I will be happy to hear about any other character set created to function with this program.

Jeffrey Timm
Zorba Information Exchange
6-J Aspinwood Way
Baltimore, Maryland 21237

*[Reproduced from the **Oracle of ZEUS**, the newsletter of the independent Zorba Equipment Users' Society.]*

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OSBORNE EXECUTIVE & VIXEN

IEEE-488 to Centronics Pin-outs

by Thomas Kardos

*[Also in the November 1983, **FOGHORN**, page 34.]*

All new Osborne Executive owners face the dubious joy of trying to connect their Centronics printer to the IEEE 488 port. After many trials and tribulations, they discover that nothing works while the local dealers are unable to come up with a cable that has the correct pin-outs.

This problem is the result of the original Osborne Corporation publishing the Executive manuals with the pin-outs for the Osborne 1 instead of the Exec. The original Corporation failed to provide either a correction to the manuals or a notification to Executive owners.

Correct Pin-out for Executive IEEE 488 to Centronics Cable

Exec	Centronics
1	2 Data 1
2	3 Data 2
3	4 Data 3
4	5 Data 4
13	6 Data 5
14	7 Data 6
15	8 Data 7
16	9 Data 8
18	19 Signal ground
6	1 Strobe
19	20 Signal ground
20	21 Signal ground
8	11 Busy
21	22 Signal ground
22	23 Signal ground
10	13 Select
23	24 Signal ground

Cable type: flat ribbon 26-wire

The following fixes work:

1.) If you have a dealer, provide him with the following pin-out configuration and he will be able to set you up with a correct cable.

2.) Contact United States Instrument Rentals, 2988 Campus Drive, San Mateo, CA 94403, (415) 572-6600. Ask for Cindy Robinson and offer to purchase part #114434 at about $15 each. It is the cable in question: IEEE 488 to Centronics.

3.) Copy this configuration and place it on page 210 of Volume 2, *Working With Text and Spreadsheets.*

4.) Copy this configuration and place it on page 455 of the ***Executive Reference Manual.***

A blank wire separates all data bits and multiple grounds shield strobe, busy, and select lines. It is a must that the line

be kept well under 10 feet long to prevent impedance and conductance potential buildup.

The pin-out documentation problem is so serious that the above information appeared in the ***Portable Companion*** in the August 1983 issue as well as in 1985 and a half page article was printed in the ***San Jose Mercury News*** a year and a half ago. The author of the Executive manuals did provide the correct pin-outs, however in the publication process, gremlins crept in . . .

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KAYPRO

Make Your Own Master Menu for the Kaypro 10

by Veikko Rekunen

When I bought my Kaypro 10 last summer there was a Master Menu present each time I turned my Kaypro on. Unfortunately it did not satisfy my needs after I got SmartKey II, because there was no way to change the menu structure so that I could load SmartKey and its definition files before loading the programs.

I know next to nothing about assemblers, so the obvious choice was to try and use the programs I already knew. Programs like these were mainly SmartKey, SUBMIT and MBASIC.

Well, MBASIC was not good enough, so I started to learn SBASIC (bundled with my Kaypro). I'm sure I am not using it correctly — like MBASIC — but it seems to work anyway.

The following describes my attempt to write a "personal" Master Menu for the Kaypro 10.

All the following files should be written with WordStar's Non-document mode.

OWNMENU.BAS

```
VAR CHOICE=INTEGER
VAR GO.ON=CHAR
PRINT CHR(26)
TEXT 0,&
```

This program was originally written by Veikko Rekunen/SUOKUG/FINLAND (address SF-61400 YLISTARO,FINLAND) using a Kaypro 10 microcomputer and SBASIC. Its purpose is to form a Master Menu for different programs. This program may be copied freely, and subsequently altered to suit any personal needs, but it may not be used for commercial purposes without a written permission by the author. This Menu system requires the use of Kaypro bundled software and SmartKey (or a similar key redefinition program) all of which are proprietary material, and NSWEEP.COM, WSO/WS15.COM (here renamed WSLOAD.COM), and DIRREP.LBR, which are in the public domain. The author is not responsible for any ill effects the use of this program may cause, as it has only been tested on one Kaypro 10 equipped with the Finnish keyboard system. Special thanks are hereby given to Tom Enright for his Technical Forum in PROFILES, June 1985. This copyright message may be deleted before compiling this program for personal use, but it must be present if this program is copied either in source or object code to any third party, who may then delete it for his or her own personal use.

[NSWEEP.COM is on the FOG Starter Disk and WSO/WS15.COM is on FOG/CPM.010.]

```
&
INPUT ''Start the menu by pressing any key'';GO.ON
PRINT CHR(26)
PRINT CHR(27)+''BO'';
PRINT''                                    M A I N   M E N U''
PRINT CHR(27)+''CO'';
TEXT 0,&

      1     WORDSTAR       general texts
      2     WORDSTAR       school material
      3     WORDSTAR       letters
      4     WORDSTAR       translations
      5     SUPERCALC
      6     DBASE II
      7     TELECOMMUNICATIONS
      8     COPYING FILES (nsweep)
      9     DIRECTORY BACKUP (dirrep.lbr) AND SWITCHING OFF
     10     EXIT THE MENU

&
INPUT''And your choice is .....'';CHOICE
ON CHOICE GOTO 1,2,3,4,5,6,7,8,9,10
10 EXECUTE ''CURSBLNK.COM'',''SUBMIT SMARTOUT''
END
1 EXECUTE ''CURSBLOK.COM'',''SUBMIT WS 1''
2 EXECUTE ''CURSBLOK.COM'',''SUBMIT WS 11''
3 EXECUTE ''CURSBLOK.COM'',''SUBMIT WS 12''
4 EXECUTE ''CURSBLOK.COM'',''SUBMIT WS 13''
5 EXECUTE ''CURSBLNK.COM'',''SUBMIT SC''
6 EXECUTE ''CURSBLNK.COM'',''SUBMIT DB''
7 EXECUTE ''CURSBLNK.COM'',''SUBMIT MDM''
8 EXECUTE ''CURSBLNK.COM'',''SUBMIT COPY''
9 EXECUTE ''CURSBLNK.COM'',''SUBMIT TURNOFF''
```

Having written this you just compile it using your Kaypro bundled SBASIC compiler. Make sure this file is on the same disk as your SBASIC.COM and write: **SBASIC OWNMENU**↵ (where ↵ means carriage return). The compiler will inform you of any errors, which you will have to correct through WordStar again.

Now this need some explaining. I have my own SmartKey definitions for each of my main programs, WSK for WordStar, SCK for SuperCalc, DBK for dBASE II, MDK for telecommunication and SWK for NSWEEP.

I have spread my WS files on four user areas in order to avoid superfluous disk directories. The two files CURSBLOK.COM and CURSBLNK.COM may be replaced by any .COM files, but there must be a .COM file in each EXECUTE statement. Otherwise, CRASH!

The two CURS*.COM (and CURS*.ASM) files are based on Tom Enright's Technical Forum in ***PROFILES***, June 1985, so thanks to him!

CURSBLOK changes the Kaypro cursor into a solid block, and CURSBLNK returns it to its normal state, a blinking block. These two .ASM files must also be created with WS's N-mode. After they have been written, make sure you have PIP'ed or NSWEEP'ed ASM.COM and LOAD.COM onto the same disk, then assemble them with **ASM CURSBLOK↵** and **ASM CURSBLNK↵** and load them with **LOAD CURSBLOK↵** and **LOAD CURSBLNK↵**. This should produce ready .COM files to run. Any errors found must be corrected via WordStar's N-mode.

CURSBLOK.ASM

```
        ORG   100H
START:  MVI   A,10
        OUT   28
        MVI   A,0
        OUT   29
        RET
```

CURSBLNK.ASM

```
        ORG   100H
START:  MVI   A,10
        OUT   28
        MVI   A,96
        OUT   29
        RET
```

By the way, the solid block is much nicer in WordStar than the blinking cursor, especially if you do a lot of search-and-replace operations. Try it.

Do not forget that the following programs must also be written with WS's N-mode. Make sure the extension is .SUB. (Each of these is naturally a separate file, though here they have been written side by side.)

STARTING.SUB

```
fixkey 7 0
smartkey
ownmenu
```

DB.SUB

```
fixkey 5 2 dbk 0
user 6
```

COPY.SUB

```
fixkey 5 2 swk 0
nsweep
:
ownmenu
```

MDM.SUB

```
fixkey 7 0
smartmdm mdk
user 7
```

SC.SUB

```
fixkey 5 2 sck 0
user 2
```

WS.SUB

```
fixkey 5 2 wsk 0
cursblok
b:
user $1
```

SMARTOUT.SUB

```
fixkey 7 0
```

TURNOFF.SUB

```
:IS YOUR DIRREP DISK IN DRIVE C:
:
:IF NOT, PLACE IT IN DRIVE C:
:
:AND PRESS ANY KEY
PAUSE
:
C:
DBACK A
DBACK B
:
A:
:PLEASE DO NOT REMOVE YOUR DIRREP DISK FROM DRIVE C:
:
:BEFORE THE RED LIGHT HAS GONE OUT!
:
:SHOULD YOU NOT WISH TO RUN SAFETY,
:
:PRESS THE DELETE KEY.....
:
:QUICKLY NOW!!!!!!!!!!!!!!!!!!!!!!
:
PAUSE
:
SAFETY
SUBMIT STARTING
```

One more thing must be done now. As your SUBMIT will not allow you to load the various programs in other user areas, each SmartKey definition file must include command for starting and exiting the different programs.

In my system the starting key is **SuperShift ^A** and the exit key is **SuperShift ^Q**. Each exit key moves to Drive A User 0 and runs the Menu again.

Thus in WordStar the starting definition is **A:WSLOAD↵D** (that's the WS0/WS15 renamed) and the exit definition is **XA:↵user 0↵ownmenu↵**.

There is one exception in my system. My telecommunications SmartKey has a longer delay between characters than the others, so it must be loaded separately. This also means that whenever I wish to return from telecommunications to other programs, I must exit this special version of SmartKey (called Smartmdm) and start all over again. This is easily done by defining the exit key of MDM740KP.COM as CPM↵
user 0↵
SUBMIT STARTING↵.

One more thing. If you use NSWEEP for making backup copies, and wish to return to the menu, you must first go back to Drive A User 0, otherwise a disaster will follow.

So just define your exit key from NSWEEP as **LA0:↵X**, and it will work all right.

This system is definitely NOT the be-all-and-end-all as far as a menu for the Kaypro 10 is concerned, but this system works in practice. I believe it is rather easy to build your own system based on these hints, should you so wish. In case you are interested, I have begun to plan a revised version where I will use the CHAR variable allowed by SBASIC. This will remove any need to press ↵ after the menu selection.

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KAYPRO

A Graphics Package for the 1984 Kaypros

by Veikko Rekunen

General

BARGRAPH.COM and BARGRAPH.DOC form a graphics package for the 1984 Kaypros. Subsequently it should work only in those Kaypros with the graphics capability. All versions of BARGRAPH.COM, whose version number is smaller that 2.0 may freely be copied to friends and acquaintances, but they must not be sold nor included in any package for sale

without a prior written permission from the author. All enquiries should be addressed to:

Veikko Rekunen
SF-61400 YLISTARO
Finland

BARGRAPH version 1.8 is still anything but perfect, but it offers a limited possibility to display information as bar graphs. Due to the large file size that SBASIC forms, the program has some limitations. The most notable are:

* Only 12 bars at one time;
* No printer support as yet.

Using the Program

You start the program as any other CP/M program by typing:

BARGRAPH ⏎

The program accepts both small and capital letters IN ANY OTHER OPTION except when saving loading graphs. Thus it is possible to use small letters almost exclusively.

The program is supposed to be very easy to use. When you start it, you will first see the copyright notice. Pressing any key will move onwards to the main menu.

This is what the main menu looks like:

```
MAIN MENU

(G)ive values
(H)eadings
(V)alue change
(D)raw graph
(C)hange scale
(S)ave graph on disk
(L)oad file from disk
(Q)UIT!
```

You now make your choice merely by pressing the appropriate key. You may use either small or capital letters. DO NOT PRESS ⏎ (carriage return) AFTER THE KEY!

The basic principle in BARGRAPH is that every time a prompt is presented as a single letter within the brackets, as in (**G**)ive values, you only have to press the letter within the brackets. Do NOT press ⏎ after the letter!

The program has the following default values when it is started:

maximum bar value = 100
bar type = (0)pen

NOTE: These defaults are in force ONLY when the program is initially started. Later they may be quite different.

Main Menu Choices

(**Q**)UIT!!

This choice returns you to CP/M. This choice is verified with an additional question. You must remember to save your graph BEFORE (Q)uitting.

(**G**)ive values

This option enters the bar values. First you will be asked whether you wish to (**A**)dd more values or (**S**)tart again at the beginning. If you (**A**)dd values, the new values will be added to the previous ones (producing more bars); if you (**S**)tart again, the old values are destroyed.

BE sure to save any graphs you wish before choosing this option.

Next you will be asked the maximum value. After this if you try to enter too large values, the program asks you again, thus it is not possible to enter values which exceed the maximum value.

The maximum number of bars is 12. They may be defined (**O**)pen by pressing either **A** or **a**, or merely ⏎. In this case you will see the bars' outlines. If you press **F** or **f**, they will be filled bars.

It is easy to accentuate the bars by defining every second one (**O**)pen and the others (**F**)ull. Usually (**O**)pen bars are good enough, as the (**F**)ull bars are rather bright.

Each bar may be given a name (maximum five characters). These names will be printed below the bars. If you enter more than five characters, the rest will be truncated. After you have entered the name press ⏎.

After you have given the data for one bar, you may go on entering data by pressing ⏎ or **Y** or **y**. If you press **N** or **n**, you will be returned to the main menu.

(**H**)eadings

Each bar graph can be given a heading (maximum 50 characters). This heading is printed on top of the graph. After you have entered the heading, press ⏎. After the heading prints the present maximum value of the bars.

(**V**)alue change

First you will be asked whether you merely wish to change all the present bars into (**O**)pen or (**F**)ull bars. Pressing ⏎ or **N** or **n** moves you onto the the next options. This next option is also automatically performed after you have changed all your bars (**O**)pen or (**F**)ull.

When changing the bar data you may change their values, define bars as (**O**)pen or (**F**)ull, and change the bar name. As there are only 12 bars possible, each bar must be gone through. Pressing ⏎ will move to the next bar.

NOTE: It is not possible to enter values that exceed the set maximum value. If you wish to enter values that are larger than the previously set maximum value, you must first use options (**C**)hange scale.

(**D**)raw graph

This options clears the screen and draws the present graph, maximum value, possible header and bar names. After the graph has been drawn, the cursor remains on the upper left corner. Pressing any key will return you to the main menu, but all the bar data is still intact and may be changed at will.

(**C**)hange scale

The first set maximum scale may be freely changed, but with ONE limitation. It is not possible to set a new maximum value that would be smaller than the original value of the so far largest bar.

Thus, if your original maximum value was 10, then you set a

new maximum value at 50, and enter a bar value of 23, it is not possible to set a new maximum value smaller that 23. There is NO auto scaling!

(S)ave graph on disk

First you will be prompted for file name. A legal CP/M file name will do, thus it is not possible to use small letters in file names. Should you try this you will be warned. Do NOT ADD THE EXTENSION. The program will automatically name your files with the extension .BGF.

If another file by the same name already exists on the disk, the previous name will be made a backup file with the extension .BAK.

NOTE: There is no disk directory checking from within the program, so check your file names BEFORE entering BARGRAPH.

(L)oad graph from disk

This option loads a previously saved graph from disk. The same limitations naturally apply to the file name. Do NOT write the EXTENSION, only the file name.

You may use the data loaded in exactly the same way as if you had originally entered it in the program. You may add, change and resave the graph.

(BARGRAPH.COM and BARGRAPH.DOC is available on FOG/CPM.036.)

I would welcome any comments. Future versions should include printer support and changing the number of the bars.

I wish to thank my wife Marja, who was the first (and probably the harshest) critic of the program.

[The author takes no responsibility for any damage or loss due to the use of the program, because the program has not been tested for all possible uses.]

• • • • • • •

OSBORNE 1

Osborne 1 Screen Graphics Via Assembly Language

by Robert E. Daniels

A recent meeting of our local group, the Raleigh Osborne Computer Club (ROCC), featured a presentation on assembly language (AL) by Bill Pugh. Since he dealt with "generic" CP/M, the obvious challenge was to figure out how to access Osborne screen graphics with AL.

Many of you, no doubt, are way ahead of me on this one, but since I couldn't find any simple explanation of this in the ***FOGHORN*** or the available popular books, here's the trick I figured out.

It's a case of reverse engineering the wheel. I'll spare you the blow by blow of my innumerable crashes and just comment that for me (totally unschooled in programming but fond of crossword puzzles, a good game of chess, etc.), AL is a real kick: the successes are quick and the failures often spectacular.

A. Turning the Graphics Mode On and Off

In assembly language, just as in MBASIC or dBASE, you turn the graphics mode ON by sending the familiar sequence <**ESC g**> (escape lower case g) to the console screen. To turn the graphics mode off you use <**ESC G**>. The relevant FRAGMENTS of a program that do this are:

```
escape  equ     27          ;27=1Bh=^ESC
graph   equ     'g'
nograph equ     'G'
bdos    equ     5           ;BDOS entry point

        lxi     d,grfon     ;point to graphic ON
        mvi     c,9         ;CP/M function number 9 =
                            ;send character string whose
                            ;starting address is in DE
                            ;register pair to screen
        jmp     bdos
```

(commands to print the graphics character go here) <*>

```
        lxi     d,grfoff    ;a parallel routine to
        mvi     c,9         ;turn graphics off
        jmp     bdos        ;

grfon:  db      escape,graph,$
grfoff: db      escape,nograph,$
```

B. Converting ASCII Numeric Values for Graphics

Here's where we figure out what commands to put in the above program to print our graphics (<*> above). The TRICK is that you have to subtract 65 decimal (41h) from the ASCII numeric value of the character to be displayed in the graphics mode.

1. For SINGLE CHARACTERS this can be done directly by placing the value in the accumulator and subtracting 65 before placing the value in register E, putting the CP/M function number 2 in register C, and calling BDOS. For example:

```
        lxi     a,#         ;# is your number. Of course
                            ;there are other ways to put
                            ;a value in the accumulator
        sui     65
        mov     e,a
        mvi     c,2
        jmp     bdos
```

2. For STRINGS you need to translate the string expressed in normal ASCII characters (or numbers) into a string in which each value in succession has been decremented by 65. Assuming the string you wish to convert to graphics characters is the one labelled `grafmes`: (which is 17 characters long), the conversion is accomplished by the following module which should be put in your program before turning the graphics mode on:

(equates and initialization statements here)

```
        lxi     d,grfmes;
        lxi     b,272   ; (--this number is
over:   ldax    d       ;    255 + the number
        sui     65      ;    of characters in
        stax    d       ;    the string to be
        inx     d       ;    displayed in the
        dcx     b       ;    graphics mode
        mov     a,b     ;    (here 255+17=272)
        ora     a       ;
        jnz     over    ;
```

(then start graphics, do the display commands, close graphics, and add the following to the directives to initialize storage areas in memory)

```
grfmes: db      'AYAXAYAXAYAXAYAXA$'
```

The above module comes from the AUTOCPM.ASM listing on pp. 240-242 of the ***Osborne User's Reference Guide*** (mine's a black, three-ring notebook that came with my tan case). (The same listing, AUTOST.ASM, plus additions, is listed in the ***FOGHORN***, May 1985, pp. 62-64. See also AUTOSTRT.COM in Thom Hogan's ***Osborne CP/M User Guide***, 2nd ed., pp. 183-184, which lists everything but the graphics routine.) THE AUTOCPM listing is a version of AUTOST that displays the Osborne Computer Company's "Big O" logo and then executes HELP.COM.

I used the "thrash and crash" method to discover the critical parts of the AUTOCPM.ASM listing. Many tries later I figured out that the critical number (in the second line) equalled 255 plus the number of characters in the "Big O" graphic.

This seemed like a magic number (0 through 255 = 256 characters) and it was! I didn't fully understand what I was reading in this loop until I stepped through the program with the T command in DDT, and saw that the value in the BC register pair was decremented by 1 and the left-hand (8 bit) part of the value in BC was moved into register A and compared to 0 (ora a).

Thus when the value in BC dropped from 100h to FFh (255 decimal), the value in A dropped from 1 to 0 and the program stepped out of the "over" loop.

At that point it dawned on me that that subtracting 65 from single values is the way to print single characters in graphics (Pt. 1, above).

[AL-LOGO.ASM, AL-LOGO.COM is a program on FOG/CPM.041, that creates a simple logo using the string conversion method. ALGRAPHS.ASM and ALGRAPHS.COM also on FOG/CPM.041, displays the complete set of Osborne 1 screen graphics characters with their corresponding alphabetical character values (A through a, plus DEL [ASCII 127]), using the single character at a time method of graphics display.]

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EPSON PX-8

Loading Portable WordStar Automatically on the Epson PX-8

by W. Terry Whalin

In the June 1985 ***FOGHORN***, Conrad Stenton mentions in a single sentence that he has his Epson load Portable WordStar automatically logging onto the Drive A (RAM). Yet he fails to explain exactly how he does it.

I was really frustrated since I knew it was possible yet wondered how to do it. The Epson manuals make it fairly straight forward how to get it to auto boot WordStar. I did this but if the Epson is not auto logged onto Drive A, you will have potential problems.

WordStar will boot when the machine is turned on, then you will have to log onto Drive A using the **L** function of WordStar. If you do not log as your first step, then you can begin a file with **D** and then type the file name. However you cannot open that new file name as an error message will appear telling you that you are logged onto the B or C drive (ROM) and that the Epson can not use those drives.

It is frustrating that you can enter a few steps before the error message appears. Here is the means of resolving this problem.

1. Note the CP/M chip is in B: and the WordStar chip is in C:.
2. Get into the system by typing **^help** (control-help).
3. Using the system menu, select 3 for auto start.
4. To assign a new string, select 2.
5. The string that you need to type is:

C:WS^M↵

6. The only other caution is when you turn the machine off after doing any manipulations (such as in CP/M), make sure you leave the machine logged onto Drive A.

It is so simple, I am amazed that I didn't find it earlier. Once this procedure is accomplished, you wonder how you did without it.

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MONTEZUMA CP/M UPGRADE FOR RADIO SHACK MODEL 4

Notes on the Montezuma CP/M Upgrade

by Stephen T. Whitney

Here are a few tips and some information I would like to pass on.

1. Use NSWEEP version 1.99 not DISK for transferring files to and from Drive M. Later versions of NSWEEP for transferring files to and from Drive M should work fine though some are several K larger than 8K.

2. You can create a turnkey WordStar system ready to run from Drive M if you create the following file in WordStar's Non-document mode and name it W.SUB:

```
PIP M:=A:WS*.OVR
WS
^Z
```

Then using the Montezuma Micro CP/M 2.2 utility CONFIG, select option H and answer name of file to auto boot with as:

SUBMIT W.

That is eight entries with the space — the maximum.

3. To create more space on Drive M, I followed up on Conrad Stenton's letter in the August 1985 ***FOGHORN***. Here is an easier way to chop WSMSGS.OVR down to size using DDT. It will add 13K free space to Drive M. You will lose all J menu prompts except display and set help level menu choices. It seems to do the trick without problems. Absent J menu prompts if asked for, just return you to the document you are editing. This size likely can be trimmed some more. With DDT and WSMSGS.OVR on Drive M for speed or on a backup disk:

```
DDT M:WSMSGS.OVR↵
^C
SAVE 67 WSMSGS.OVR↵
```

Then copy this file — reduced 43 percent from 118 decimal pages — to Drive A. You can run things completely from a RAM disk drive. Very nice and fast.

4. Here is an eight-entry Macro to correct a word with reversed letters: **^KB^D^KK^D^KV**. Osborne users can add **^KH** to complete. Monty's KEYDEF only allows eight. Just line the cursor on the first of the two letters transposed and voila! they will be switched back to the correct order.

5. The ***System Programmer's Manual*** is now available from Montezuma Micro. The cost is $39. Write to them for details. The new address is:

Montezuma Micro
P.O. Box 763009
Dallas, TX 75376-3009

6. Monty has released a utilities package for $49 which solves a major hassle. To use all of the goodies you have to have the additional 64K RAM. Utilities provide for moving files between CP/M and MS/PC-DOS, TRS-DOS 1.3 and 6.x; auto execute of multiple commands, and so on.
The best is **SYS2M**. Monty's CP/M 2.2 is copied over to Drive M from which it is loaded at each warm boot. You can assign Osborne or any other supported format (about 50) for BOTH drives (A and B). Before, Drive A had to be in Monty's format.

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A Bug in CP/M+

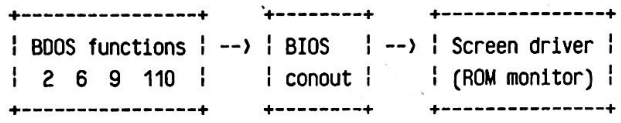
by Gordon Wilk

CP/M 2.2 stores certain system variables in low memory. CP/M+ supplements these with a System Control Block (SCB) in high memory as described by Eric Meyer in the April 1985 ***FOGHORN***, page 58. One of the SCB variables, however, is not properly maintained by the CP/M+ BDOS.

Location SCB+1Bh (absolute address F8B7h) contains the Console Cursor Column. According to the CP/M+ documentation, this one byte value should contain the column number of the cursor at the time the value is read.

A number of attempts to make use of this value almost convinced me that BDOS concealed a random number generator. Further investigation showed that it was just an improperly maintained value as well as how to use it or work around it.

Printing characters on the screen actually involves three separate parts of the operating system:



Screen printing is done by calling BDOS function 2, 6, 9, or 110. Functions 2, 9 and 110 expand tabs, check the keyboard for ^Q or ^C and pass the characters one at a time to the BIOS. Function 6 just passes the character on. These functions also more or less maintain the SCB Cursor Column.

If the character to be printed is a TAB, functions 2, 9, and 110 keep sending spaces and incrementing the SCB Cursor Column until it is evenly divisible by eight.

If the character is a backspace (08 hex), these functions correctly decrement the SCB Cursor Column before passing the character on to the BIOS. Function 6, on the other hand does not expand TABs (or increment the cursor column for them) and does not decrement the Cursor Column for backspaces.

The ASCII DEL character (7F hex) is treated as a control character by all functions; i.e., the Cursor Column is unchanged when it is printed. The Exec BIOS considers DEL a graphic character: a semisolid block. Graphic characters are treated as control characters by all functions; the Cursor Column is not updated.

Whenever the BDOS sends a printable character to the BIOS for console display, it increments the SCB Cursor Column by one; whenever a ↵ is sent, the SCB Cursor Column is reset to zero. This is true for all the screen output functions including function 6.

The BDOS does no processing of other control characters, just passes them on up the line. Thus it knows nothing of direct cursor addressing or windowing which can move the cursor, nor does it know that the character following an ESCape (ASCII 27) is not printed.

The BIOS routine "conout" selects the appropriate ROM routine to handle the character. It knows whether to echo the output to the printer and whether redirection has been requested by changing the "CON:" vector in the SCB, etc.

Conout does no actual processing; it just passes the character on to "cout" in the ROM monitor if output is to go to the screen.

The ROM monitor does all the control character processing (except for tabs). It is the only part of the operating system that knows about the control characters and escape sequences that mimic the Televideo 920 terminal.

Since some of the control characters and escape sequences cause the cursor to move, we now have a situation in which the cursor can move without the SCB's Cursor Column being changed. On the other hand, printable characters which are really part of an escape sequence will increment the SCB Cursor Column without the cursor moving.

We can now see the problem. The SCB block is maintained by BDOS while only the screen driver (in ROM BIOS) knows where the cursor really is.

Digital Research should have required the BIOS to maintain the Cursor Column value. This would not have been foolproof in systems with external intelligent terminals but the BIOS would know more about them than BDOS could. The present system would only work if the console acts as a very dumb terminal.

The same problem exists in CP/M 2.2 but the cursor column count is a private BDOS variable. There is more excuse for CP/M 2.2 since all terminals were quite dumb when it was written.

Now what can we do about it, short of modifying the BIOS?

We cannot, unfortunately, ignore it. The BDOS uses this value to expand tabs. If you use any of the Executive's extensive set of controls to move the cursor (direct screen addressing, windows, or 31hex for new line) or any escape sequence to change the screen appearance, BDOS will have an incorrect column position for the cursor and expand tabs incorrectly. If function 10 is used for line input, CR/LF will be inserted whenever BDOS thinks it is at the end of a line.

Fortunately the ROM monitor keeps the actual cursor location in high memory, at FD53hex, where it can easily be read. The 16 bit value kept here is the actual address of the cursor in bank 7. It can be read and converted into row and column. It can also be used to correct the SCB Console Cursor Column.

The screen is located beginning at C0000hex in bank 7. Each screen line occupies 128 bytes of which only the first 80 are displayed. The 16 bits of the cursor position address can be viewed as having the following format:

```
oooRRRRR RCCCCCCC
```

where ooo is an offset, RRRRRR is the six bit row number and CCCCCCC is the seven bit column number. It is easiest and quickest to pull this apart in assembly language:

```
;       GET CURSOR POSITION
; Get correct cursor row and column and reset SCB.CursorCol
;ENTRY: none
```

```
;EXIT:  L = cursor column
;       H = A = cursor row
;       BC,DE preserved
;       SCB.CursorCol updated to agree with monitor CURPOS
;
BiosCurPos  EQU 0FD53h  ;address of BIOS cursor position
SCBCursCol  EQU 0F8B7h  ;address of SCB Cursor Column
;
GET$CURSOR:
        LHLD    BiosCurPos ;Get BIOS cursor position
        MOV     A,L
        ANI     07Fh       ;column mask
        DAD     H          ;shift all row bits into H
        MOV     L,A        ;L=col
        MOV     A,H
        ANI     01Fh       ;row mask
        STA     SCBCursCol ;Store in SCB
        MOV     H,A        ;H=row
        RET
```

If you are only interested in the cursor column, it's even easier, and short enough to be a macro:

```
MACRO   CurCol          ;returns cursor col in A and
                        ;resets SCB.CursorCol
        LDA     0FD53h  ;;Bios CURPOS
        ANI     07Fh    ;;lo 7 bits
        STA     0F8B7h  ;;SCB.CursorCol
        ENDM
```

This can be done in BASIC:

```
DEFINT C
CURCOL = PEEK(&HFD53)
CURCOL = CURCOL - 128*(CURCOL/128)
POKE &HF8B7, CHR$(CURCOL)
```

BASIC maintains its own cursor position count, returned by the POS function, using the same logic as CP/M. It can be just as incorrect and cannot be easily updated. This routine returns the correct column; it does not correct the POS function.

You need to work around this bug if you are using direct cursor addressing, windowing, or almost any other escape sequence AND have tabs in the text you are printing.

Some possible work-arounds are:

1. Avoid tabs or process them yourself. If you are reading a file and then printing it, it is best to expand tabs as the file is read, rather than when it is printed since no knowledge of the cursor position is required. The technique is to keep a count of characters read since the last ↵; when a TAB is read, insert spaces and increment the character count until it is divisible by eight.
2. Begin each printing of a string with a ↵. Carriage returns cause the SCB Cursor Column to be reset to zero which is correct after a carriage return. This is not possible if you are using direct cursor addressing but it is possible with windowing.
3. Use one of the above functions to reset the SCB Cursor Column before each string is printed. This will not work properly with windowing. The value at FD53hex reflects the absolute screen address and tabs will be incorrect with respect to the window unless the window's left boundary is in a column divisible by eight. It will work with direct cursor addressing. Note that the correct value for the SCB.CursorCol is really (absolute cursor column) — (left column of window).
4. The SCB Cursor MUST be reset before BDOS function 10 is used for line input as this function uses the SCB Cursor to expand tabs and to insert new lines when the cursor reaches the SCB Console Width. Under these circumstances, the safest way to use function 10 is to position the cursor, correct the SCB Cursor Column, and then call function 10.
5. If function 6 is used for input or output, the SCB Cursor Column must be reset.

Higher level languages pose individual problems. Pascal and C normally use function 2 for output. The routine to read and set the cursor column can be used as in-line assembly code or coded in Pascal or C.

MBASIC and CBASIC both have internal, private, column counters which work the same way as the one used by BDOS and have the same drawbacks. Suggestion #1 above is the only solution.

dBASE uses direct BIOS calls and keeps its own column counter. It is "smarter" than others since CLEAR and the @ function will correctly set the counter. dBASE, however, does not know about escape sequences and control characters. The common statement: **@ x,y SAY prompt GET var** will GET the variable at the wrong column if the prompt contains an escape sequence. The solution is to use the long form: **@ x1,y1 SAY prompt @ x2,y2 GET var** since the second @ resets the cursor column.

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Tongue in Cheek "Languages"

Some other languages we are sure you didn't know existed!

UNBOL (by Harry M. Hawkins)

(Uncommon Business Oriented Language.) Designed for "second books" business applications. Commands automatically enter data in "actual" amounts and "skimmed" amounts for reporting to IRS. All calculations adjust percentages so that amounts payable as taxes are reduced and hidden profits are automatically posted to a "hidden" ledger. The hidden account is automatically destroyed if the appropriate password is not used for access.

Use of the SWISS command will place all skimmed profits in a numbered Swiss bank account and then erase all evidence of the trail. User must be certain to copy the Swiss account number for future reference since it will also be erased 15 seconds after it appears on the screen.

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CORRECTION

Debugging FILIST.BAS

by Stephen T. Whitney

As I poke about I find oddities not documented or poorly so about the Osborne Executive's use of graphics within BASIC. For example, in debugging FILIST.BAS, ***FOGHORN*** Vol. V, No. 1, October 1985, p. 39, I discovered that reverse video is supported on the Executive with:

PRINT CHR$(27);"("

Also, the same effect is gained from the A> prompt by pressing **ESC** then **SHIFT** (. This is as useful as the accidental use of V (view) in NSWEEP on some .COM files throws the Executive into reverse video. Also supported is underlining as written in this program.

Bug correction for FILIST.BAS: Line 1290 the third equal sign should be a minus sign:

1290...=CHR$((ASC(UUU$))-128

Subtracting 128 from the CHR$ value compensates for WordStar's setting of the high bit on the last letter of each word.

Also a bug. Line 1110. A colon and not a semicolon is needed between "DONE" and END.

Also I cannot figure out in the lines 1180, 1190 what function GG% serves, as it is referenced in no other line. Typo? Eliminating these two lines causes no problems. Assuming no typo, what does this section of code do? It seems to process pure ASCII text, so if reverse video is turned off in an earlier line as I have done, everything seems to go without trouble; at least on my Executive.

Also, the submission should have noted that it was written for the Osborne 1. It does not work on the Radio Shack 4p, (likely others) as some of the CHR$ in the first 32 ASCII places are used differently on different computers.

I found out the hard way! I have a version that will run on the Model 4p nicely, as it avoids graphics. Just replace the graphics statements in lines 1300-1340 with printable strings. For example I substitute for CHR$(27);"1:--"<<<" and ">>>" for "m" to bracket text that is underlined.

If there is interest, I will send a copy of the altered, more generally acceptable program.

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Wrong Author

Wayne Resta wrote the article on page 74 of the April ***FOGHORN***: *File Transfer Between the NEC 8201A & the Exec,* not Ken Barbier as acknowledged. The MBASIC program included in the article was written by Ken Barbier, but not the article itself.

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FOR SALE

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Unused and with full documentation. Five writer software packages: SpellGuard, Math, Grammatik, DocuMate/Plus, and Footnote. Price is $49.95 which includes shipping, handling and tax. Personal check is OK. John Brewer Electronics, 405 Grand Ave., Suite 210, So. San Francisco, CA 94080.

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Osborne Vixen, excellent condition, with Centronics cable and complete set of software programs and games. Includes WordStar 3.3, Notebook Database, dBASE II, Grammatik, Grafiks 2.0, Write Hand Man, Abstat, Medstat, Enhancer, many more. All for $750. Send check or money order to Dr. Gregory Smith, Preventive Medicine, Nuernberg Hospital, APO NY 09105.

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Osborne 1 For Sale

Grey case, 80 col., 2 double density drives, Epson MX-80 printer w/ cable, Taxan monitor. dBASE II, WordStar w/ MailMerge, CBASIC, MBASIC, SuperCalc. Reconditioned. Used only occasionally. $520, Mark (415) 529-1729 or 232-9993.

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FOG MEMBER ANNOUNCEMENTS

***Portable Companion* Magazines**

Set of 11 issues: $10 plus shipping.

Shipping by UPS: east coast $4, mid west $3, west coast $2. I purchased all of the ***Portable Companion*** magazines at the Osborne bankruptcy sale on April 29, 1985. The dates are from Dec/Jan 1983 to May/June/July 1985 but some issues have been sold out. Single issues available at $1 each with shipping by US Post Office at $1 per magazine. Check is OK. John Brewer, 3817 Radburn Dr., So. San Francisco, CA 94080.

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Two Osborne 1's For Sale

Two 80 col., DD Osborne 1's both with Comm-Pac modems and Executive fans. Both O-1's come with 12" green screen monitors, and assorted printer cables. Best offer for all, or best offer on an individual system. Call (415) 471-8604 after 6pm. Both machines come with software too numerous to mention.

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Have need for double density software and documentation library: WordStar/MailMerge, dBASE II, SuperCalc or Multiplan and MBASIC. Will consider any additional software. Contact Win Richardson, 252 Wrights Mill Road, Coventry, CT 06238, (203) 742-6012.

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Osborne 1 For Sale

Double density, blue case, with all original documentation and software (CP/M, WordStar, MBASIC, CBASIC), plus SuperCalc 2, Uniform, & FileTransporter. Like new. $350. Call Geoff at (408) 554-0724.

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Osborne Vixen For Sale

Two 400K DS/DD drives, 7" internal monitor, 80 column, with software: WordStar 3.3, SuperCalc 2, MBASIC, Osboard, Media Master, Desolation; custom numeric keypad, 6 mo. old, $700 or B.O. Bill, (303) 973-8011.

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Hospitality for FOG Members Visiting Israel

The Israel Osborne Users' Group cordially invites FOG members visiting Israel from all over the world to attend our meetings (listed in the Calendar), or to get acquainted with some of our members on an informal basis.

While in Israel, please call one of the officers below for more information. All speak English, and most speak other languages as well. IOUG wants you to feel at home in the Holy Land.

Name	City	Telephone
Steve Ader	Haifa	04-672433
Eliahu Blum	Netanya	053-41420
Ariel Cohen	Tel Aviv	03-229818
Ezra Farhi	Tel Aviv	03-259027
Marius Ianconescu	Holon	03-841541
Jay Jacobson	Kfar Sava	052-34043
Elliott Levine	Herzlia	052-78722
Emil Silbinger	Netanya	053-24769
Eliahu Zuck	Tel Aviv	03-237496

IOUG also plans to set up a Bulletin Board in English within the next few months. We would like to serve FOG AMO's in Europe and the near and Middle East, as well as members traveling in these areas.

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PRODUCT ANNOUNCEMENTS

New Program Saves Time When You Need to Find It NOW!

SEARCH from CompuMagic, P.O. Box 437, Severn, MD 21144, (301) 969-8068 can quickly and easily find any combination of letters, words or numbers in any number of files on any number of different disks.

It is useful for the office worker or writer who has to find out where is that letter written about samples in February; the programmer can instantly see what routines use a particular subroutine call; the writer can see where that name first appears in this story.

SEARCH can be used instead of cumbersome indexing programs since you can SEARCH for any word at any time without having to specify keywords in advance!

SEARCH can look for more than one string at a time and search multiple files and disks. Wild cards are permitted in file names and search strings. The search can be performed by line or WordStar paragraph. There are many output options ranging from just file names or single lines to whole paragraphs where a match occurs.

SEARCH is only $30 for PC/MS-DOS or CP/M. For a limited time, users that need both CP/M and MS/PC-DOS versions can get them both for only $55.

To order, send a check or MO (Personal checks accepted) or call with your Visa, MC or COD order. Specify operating system and disk format. Packages are shipped UPS ground at no charge; $2 extra is charged for COD, $5 for overseas delivery and, Maryland Residents should add five percent sales tax.

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dBASE Power Tools

Fox & Geller, 604 Market St., Elmwood Park, NJ 07407, (201) 794-8883, have released QUICKPACK, another enhancement for dBASE III and dBASE III Plus.

QUICKPACK ($99) is a high speed PACKer, which can PACK your data bases up to 10 times as fast as dBASE. It can run stand-alone or from within dBASE and also comes with a QUICKCLEAN utility to "clean up" memo files.

Other dBASE III and III Plus power tools include the QUICKCODE program generator ($195); QUICKREPORT, the report writer that allows the user to create any kind of report in minutes without programming ($195); the dGRAPH graphics system ($195); the dUTIL programmer utility that takes dBASE programs and cleans them up, finds errors and speeds them up, and produces cross reference listings of programs ($149); and QUICKINDEX, a high speed index ($149). Some of these programs are available for other versions of dBASE.

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$299 Site License for Text Retrieval Program

O'Neill Software, 440 Davis Court, Suite 1822, San Francisco, CA 94111, (415) 398-2255, is issuing site licenses for its text retrieval program, Electra-Find, for a one-time fee of $299.

The site license permits an organization to make and unlimited number of copies of the program for use at one location and permits members of the organization to make copies for personal use.

Electra-Find is a general purpose utility that finds, retrieves, and automatically collects text material from multiple files. Material can be retrieved in blocks of almost any size, description or format. Files of any type can be searched without modification or pre-indexing.

Electra-Find is suitable for attorneys, researchers, programmers and others who need data base capabilities for standard text documents.

It runs on IBM-PC, XT, and AT; compatibles, and computers using MS-DOS or CP/M-80 operating systems. Individual copies cost $49.

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Desktop Publishing Now Covered in Small Press Magazine

Small Press magazine, recently purchased by Meckler Publishing Corp. of Westport, CT from the RR Bowker Co., now covers the field of desktop publishing and computers in publishing.

The publisher says ***Small Press*** is in its third year and is noted for covering the field of independent publishing. It has a paid (mail and newsstand) circulation of 8,000 and the majority of readers publish books, magazines, journals and newsletters. Computer-related publishing articles and news will be welcomed.

For more information on ***Small Press***, contact Marilyn Reed at Meckler, 11 Ferry Lane West, Westport, CT 06880 (203) 226-6967.

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Ashton-Tate Has a New Address, Phone

Ashton-Tate has moved. Their new address is:

20101 Hamilton Ave.
Torrance, CA 90502

and their new phone number is:

(213) 329-8000

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Electra-Find Text Retrieval Program

Electra-Find from O'Neill Software, Box 26111, San Francisco, CA 94126, (415) 398-255, is a text retrieval program that lets you use your existing text documents like a data base. It finds all material you want retrieved and puts a copy of it into a new file (or adds it to an existing one) for you to review, edit, print or reuse.

You can search for anything (e.g., single characters, punctuation, words, parts of words, phrases, lists of synonyms, combinations of up to 40 items as well as phonetic and case sensitive searches), and retrieve material in almost any size, format or description (e.g., sentences, lines, paragraphs, fixed length records, etc.). After the search begins, the retrieval is automatic and you can use Electra-Find in the background with multi-tasking programs such as IBM's TopView.

Electra-Find requires 64K or more RAM; one or more disk drives, DOS 2.0 or higher for IBM-PC, XT, AT, and MS-DOS computers, CP/M 2.2 (CP/M 80) for Kaypro, Morrow, Epson and other CP/M computers. It is a compiled program written in C, takes 23K on an IBM disk and 40K on a CP/M disk and there is a 10K help file. The Electra-Find disk can be removed once the program is in memory, so floppy disk users can search or save to any disk. There is a 50-page user's manual, free phone technical assistance (you pay for the call) and reduced cost upgrades. Electra-Find costs $49, plus $3 shipping.

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CAVEAT EMPTOR!

FOG *does not endorse any of the products advertised in this publication.* ***FOG*** *does not verify the accuracy of the claims in any of the ads. You should thoroughly investigate any offers before buying.*

Please let ***FOG*** *know of any difficulties encountered. Send all details,* ***in writing****, to the* ***FOG*** *office at P. O. Box 3474, Daly City, CA, 94015-0474, U.S.A.. We can't promise a solution, but we will try to help.*

All articles contained in these pages are the views of the authors. Publication does not necessarily indicate endorsement by ***FOG, FOGHORN****, or any of the officers.*

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HabaModem from Armstrong

HabaModem from Armstrong, Executive Offices, 260 N. Jackson St, Mobile, AL 36603, is a Hayes compatible 300/1200 baud modem, selling for $179 plus $9 shipping and handling, while stocks last. (It usually retails for $299.95.)

With HabaModem, users can access electronic bulletin boards and on-line data bases like The Source and CompuServe, pay bills via computer, and have the convenience of home banking. And it works with most computers.

It has low and high speed data transfer, full or half duplex and is fully compatible with the Hayes AT set. HabaModem also has an excellent call program feature that allows it to distinguish between a ringing phone, a busy signal and a voiced answer.

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Pangloss Turns WordStar Into a Multilingual Word Processor

Pangloss, from Techware Microcomputer Software, 474 Williamette St., Suite 201, P.O. Box 10545, Eugene, OR 97440, (503) 484-0520, adds four foreign alphabets — Arabic, Greek, Hebrew and Russian — to WordStar, making it a full multilingual word processor. Users create and edit bilingual text with all of WordStar's features such as boldface, underlining and compressed print.

A menu-driven install program takes the user through the installation process and the manual comes with a hands-on tutorial.

All foreign characters are displayed on the screen and printed on dot matrix and daisy wheel printers. Each installation of Pangloss makes available 94 special characters as well as all the English ASCII characters and all features of WordStar are still operative. To toggle between English and a foreign language, simply insert a control character and languages such as Hebrew and Arabic are entered right-to-left, and are displayed and printed correctly.

The program runs on a wide range of 8-bit systems including the Apple (CP/M), Kaypro, Osborne and Televideo, and a 16-bit version will soon be ready soon. Prices range from $169 to $199 depending on the system.

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Pearlsoft Extends Personal Pearl Support to Morrow, Osborne, Actrix Users

Users of the Personal Pearl relational data base on Morrow, Osborne and Actrix computers can now turn directly to Pearlsoft, the manufacturer of the software, for product support.

Until recently, this support was offered through each hardware manufacturer who had bundled Personal Pearl with its computer.

Also, users who had purchased Personal Pearl for an 8-bit computer, can get a complete upgrade for 16-bit machines for $75. Contact Pearlsoft Inc., PO Box 638, Wilsonville, OR 97070, (503) 682-3636.

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FOG MEMBER MERCHANDISE

A decision on whether or not to discontinue the **FOG** T-shirts will depend on members' interest. These T-shirts are soft blue in color with the **FOG** logo in black and are Hanes 100% cotton. They are cut large to allow for shrinkage.

Sizes currently available are small (34-36) and medium (38-40). We are out of stock on the large and X-large sizes. The price is $7.50.

The **FOG** Disk Library Directory ($5) lists the disks which have been released by the librarians. The directory has a description of the files on each disk. Updates to this directory will no longer be available. Until the revamping of the library is completed, we will not print a new directory. In the interim, a complete list of descriptions has been compiled on two disks. These disks are updated as new disks are released.

Each November issue (No. 2) of the ***FOGHORN*** contains an index to the previous volume. We maintain a full inventory of back issues, either as individual issues or as part of a "Best of" issue. See chart below for prices.

In September of each year we release a compilation of all issues of a previous volume. The **Best of Volume I** ($5) was released in 1984. This 54 page issue carries all the articles from Volume one and has no advertising. The 160 page **Best of Volume II** ($10 including Third Class postage) carries all the articles from October, 1982 through September, 1983.

The **FOG** Starter Disk is available in two formats. The double density version is on a single disk ($4); the single density version is on two disks ($4 per disk). The programs on these disks will change as better versions become available but will always be the programs needed to use other programs from the **FOG** Disk Library and **FOG** RCP/M systems. Please be sure to specify the format you require. In the event that no format is specified, we will ship Osborne double density.

There is currently about 300 disks in the library. If you cannot obtain a copy through your local group or RCP/M, you may order directly from the **FOG** office. Your order **must** specify which **disk** you want by including the **FOG** Disk Library number.

We cannot fill special requests for specific programs from several disks. The price of the disks is $4 per disk for less than ten disks and $3 for 10 or more. Unless you include a note as to which format you want, we will ship either single or double density Osborne format. (In this case, format selection will be based on the total size of files contained in the release.)

Prices of FOG merchandise

Individual ***FOGHORN*** Issues:	
Volume III (12 issues)	$1.50 ea.
Volume IV (12 issues)	$2.50 ea.
Volume V	$2.50 ea.
Best of Volume I	$5 ea.
Best of Volume II	$10 ea.
Printed Library Directory	$5 ea.
Library listing on disk (two disks)	$8
Single Density Starter Disk (two disks)	$8
Double Density Starter Disk (one disk)	$4
Copies of **FOG** Disk Library:	
less than ten disks	$4 ea.
ten or more disks	$3 ea.
FOG T-shirts (Sm or Med)	$7.50 ea.

Please total your order and add $1 for each $25 increment to cover shipping and handling. Send your payment to **FOG**, P. O. Box 3474, Daly City, CA, 94015-0474. You **must** include your membership (account) number. If shipment cannot be made, your payment will be returned or a refund will be sent.

If paying with MasterCard or Visa, be sure to include **both** the number and the expiration date. If paying with check, money order, or traveler checks, the shipping and handling charge will be waived. You should not send cash through the mail.

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FOG Membership Information

FOG, (a California corporation which has obtained its non-profit, tax exempt status from both the state and federal governments), is a users' group for persons using or interested in portable computers with related software. Most of the 15,000 members (from around the world) attend meetings at over 300 locations.

Dues in FOG are $25 per year. This entitles each member to a copy of either the ***FOGHORN*** (for CP/M users) or the new 16-/32- bit ***FOGLIGHT*** each month plus access to the disk library and the remote systems. If you want both publications, add $19. A $1 discount on each publication applies for payment made by cash, check or money order.

Local group meetings are open to the public without charge although access to the disk library is restricted to the membership. The **FOG** Disk Library contains only software copyrighted for the public domain. Piracy (the copying of proprietary software) is strongly condemned.

In the United States, the publications normally are mailed by non-profit bulk mail. For those who live out of the U.S., or those who prefer first class delivery of their publication/s additional postage must be added to the annual dues. See the chart for details. A membership brochure and card will be sent as soon as your membership is processed.

First Class Postage Rates

The following is a list of additional charges **per publication**. If you decide to receive both publications, please double the amount shown.

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